

United States - Asia Environmental Partnership

Clean Revolution: An Agenda for Environmentally Sustainable Growth in Asia

**FY 1999 Results Review and Resource Request (R4)
Submitted by the Secretariat for the U.S. - Asia Environmental Partnership**

February 24, 1997

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FOREWARD

The Secretariat for the United States - Asia Environmental Partnership (US-AEP) submitted a report describing the linkages between economic growth and environmental quality in Asia and a strategy for the US-AEP program in May, 1995. The report was based on original work by the Secretariat, US-AEP Field Office, and a technical panel organized by Winrock International. The Secretariat refined the report and strategic objectives in May, 1996, completing a Results Management Plan in October, 1996. This submission is the Secretariat's first progress report on the plan.

The Results Management Plan identifies a single strategic objective - to promote an Asian "clean industrial revolution" - and three intermediate objectives. There are four indicators for the strategic objective and ten indicators (used for internal management purposes) for the intermediate objectives. Baselines are complete for eleven of fourteen indicators (78 percent), and the Secretariat believes there has been demonstrable progress in ten of fourteen result areas (71 percent).

There are several perspectives from which to review progress. First, is something happening to suggest a fundamental shift in the direction of cleaner industrial production in Asia? Yes. The Secretariat's technical support services contractor, the International Resources Group (IRG), organized field assessments for each of ten target countries during 1996, concluding that the assumptions underlying the US-AEP program are valid and finding significant movement in the direction of a "clean industrial revolution." The findings from the Country Assessments are discussed later in this request. The technical panel for the Five Year Review will also make findings concerning the status and prospects for a "clean industrial revolution" in Asia. The following development underscores the point: five of ten countries in the region have established accreditation or certifying bodies for ISO 14000 (an international standard for environmental management), and in each of three countries, ten firms are already ISO certified. Louis Berger, International (LBI), technical consultant to the US-AEP, believes that East Asian countries may be out in front of the United States itself in the ISO arena. *Note:* ISO 14000 was launched as an international standard only in January, 1996.

Second, has the Secretariat identified an Asian platform to engage governments and industry on the important elements of the "clean industrial revolution?" Yes. Working closely with the U.S. Environmental Protection Agency, with the departments of Commerce and State, and with the US-AEP Field Office in Manila, the Secretariat is shaping the agenda for the APEC Ministerial for Sustainable Development around key elements of its strategic framework: measurement systems for industrial environmental performance, policy approaches to cleaner industrial production, and voluntary business standards for environmental quality. APEC, including as it does a large number of US-AEP partner organizations and professionals in the Asia region, is the model for follow-on initiatives with the Asian Development Bank, the ASEAN Secretariat, and World Bank.

Third, has the Secretariat expanded the number of partners, and is it reaching goals for leverage and sustainability? Yes. During the calendar year, the US-AEP completed discussions with the U.S. Department of Commerce (DOC) which has agreed to integrate the “tech rep” program within its budgetary and staffing plans for the Asia region, with the American Consulting Engineers Council (ACEC) on a plan to “privatize” the operations of the US-AEP infrastructure program, with the National Pollution Prevention Roundtable (NPPR) to replicate its advocacy network in Asia, with Business for Social Responsibility (BSR) and United Technologies Corporation (UTC) to promote the idea of a greener “supply chain” throughout the Asia region, and with the California Environmental Protection Agency (CalEPA) to establish a state-based partnership initiative in the important Pacific region. In addition, significant progress was made by the Air and Waste Management Association (AMWA) and the Water & Environment Federation (WEF), establishing institutional presence in five Asian countries this past year.

Fourth, has the US-AEP program established itself as an important part of the United States government’s economic ambitions for the Asia region? Yes. Since its organization in 1992, the Secretariat has verified the transfer of more than \$500 million in environmental technologies and identified awards for environmental infrastructure with total project values exceeding \$500 million. The development significance of this record is reflected in DOC’s enthusiastic embrace of the “tech rep” program and its increasing interest in relating U.S. foreign trade and investment policy to a substantive development agenda for the Asia region.

Fifth, is the Secretariat “managing for results”? Yes. The Secretariat has organized its management system around results. All activities are now linked directly to one or more results; reporting and presentations are organized around results; scopes of work for all contracts are being amended to reflect results; partner organizations are reorganizing grant criteria to reflect results; and the evaluation program for the US-AEP is being reorganized around results. In this process, the Secretariat has stopped design work on activities inconsistent with the results framework and sought to amend existing activity designs to reflect results. None of this has been accomplished without some institutional and professional stress, but the management team and partnership are on message.

Finally, does the Secretariat have a clear understanding with the Global Bureau and USAID field missions in India, Indonesia, and Philippines? Yes. Cooperation with the Global Bureau’s Environment Center has evolved into a close working partnership, reflected by the integration of EP3 and US-AEP programs in Indonesia and by a collaborative approach to field support. Multi-office and multi-institutional strategy and program development teams visited India and Philippines in 1996. A similar, but more targeted strategy team was also organized with the Global Bureau for Indonesia. Detailed proposals for integrating USAID field mission, US-AEP, and Global Bureau activities have been described. The Indonesian plan was approved by all parties, although the Philippine mission’s attention to the plan was diverted by staff changes within the mission itself. The India plan is pending. The Secretariat expects that the India proposal will be approved by the end of the second quarter, FY1997. Finalization there has been complicated by the linkage of the proposal to the broader Clean Technology Initiative (CTI) proposed by the Department of State.

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In earlier reports (see FY1997 and 1998 Results Review and Resource Requests and the Results Management Plan - October, 1996), the Secretariat outlined the rationale for the US-AEP program and its objective: *to promote an Asian "clean industrial revolution."* As part of the FY1998 Results Review, and in response to Agency guidance, the Secretariat will continue to identify and verify factors that affect program performance (see Country Assessments - October, 1996 and Five Year Review - ongoing). Based on these analyses, and taking account of the progress reflected by quantitative indicators, the Secretariat and US-AEP Field Office believe that program results will be achieved as planned.

A. Performance Factors

To most observers, Jakarta, Manila, and Mumbai are metaphors for an Asian future - urban areas overwhelmed by industrial expansion, fast-growing populations, numbing traffic, and waste with nowhere to go. The Country Assessments suggest, however, that an alternative future may be emerging, an alternative which just might break the destructive linkage between economic growth and environmental degradation. One glimpses the opportunity in countries like Singapore and Taiwan, even in the Philippines - glimpses of what might come to be called a "clean revolution." What are the factors supporting this optimistic assessment?

- leadership firms are adopting environmental protection and quality as a strategic business factor: Environmental quality is increasingly part-and-parcel of what both Dow Chemical and San Miguel Corporation think of as industrial best-practice, and environmental quality is rapidly becoming a competitive factor in their business operations. This is as true for Siam Cement in Bangkok, Samsung in Seoul and ACER in Taipei as for Dow Chemical in Midland and San Miguel in Manila.

- globalization and standardization are extending the reach and influence of leadership firms to the farthest corners and the smallest enterprises of the region: The environmental principles and practices of leadership firms are being transformed into industry standards and are fast becoming the template for regional commerce. The rapid take-up of ISO 14000 is one example, the "greening" of Daewoo's supply chain another, and the environmental due-diligence requirements of the LandBank of the Philippines yet another.

- globalization is also extending the reach and influence of liberal economic ideas, with real significance for the environment: Open economies seem to produce lower rates of pollution than controlled economies. This results partly from the apparent shift away from capital-intensive "smokestack" sectors in more open economies, partly from competitive pressures favoring the environment, and partly from the preference for efficiency inherent to the liberal model. Note the Philippines' recent rejection of a half billion dollar private investment for a new cement plant near Cebu City.

- the prospects for an industrial transformation in Asia are enhanced by the technological potential for pollution prevention and clean production: Technologies which reduce environmental stress while increasing economic productivity exist for virtually all industrial

sectors. And emerging revolutions in advanced materials and biotechnology, together with spectacular advances in information technologies and miniaturization, are the premise for radically new products and process technologies that harmonize environmental and economic objectives. A peek inside a new industrial plant in Asia is a peek into the future.

- the very rapid expansion of industrial capacity throughout Asia creates an extraordinary opportunity for the introduction of the environmental dimension to the production system:

By the year 2010, assuming continued rapid growth, existing firms in Asia will represent only 15 percent of total industrial output, and, by the year 2020, less than 8 percent. This dramatic growth in capacity suggests a platform for a new industrial culture, moving Asia's industrial plant up the environmental and technology ladder from pollution control to clean design, technologies, production, products, and total quality environmental management.

- new sources of investment suggest opportunities to engage global capital for needed environmental infrastructure:

The private sector is proving more adept at developing quick, innovative solutions to infrastructure and environmental service needs than their more cautious government counterparts. And the related demand for private capital is stimulating the development of new funding sources and instruments for channeling these funds into long-term project commitments. The result - a dramatic increase in the stock of environmental infrastructure in Asia. The Privatization Center in Manila is already a regional leader.

- the ongoing "reinvention" of environmental regulation away from sole reliance on command-and-control and towards a policy mix that includes market-based incentives, pollution prevention, information-based strategies, and voluntary compliance reinforce the trends identified above:

The United States is leading the industrialized world towards a "cleaner," "smarter," and "cheaper" approach to environmental regulation. Elements of the reform are being picked up throughout Asia, by environmental protection agencies, but also by economic and industry ministries experimenting with pro-environmental policies in response to increasing competitive pressures related to the environment.

These transforming opportunities do not present themselves everywhere with equal promise. The United States and most other industrialized countries operate an aging industrial infrastructure that is dependent on pollution control, retrofit, and remediation as strategies to deal with pollution. Many of the least developed countries are at a pre-industrial stage. Most countries in Asia, on the other hand, have the ingredients for a "clean revolution": an increasing public awareness and concern for the environment; improving environmental regulation and enforcement; a very rapid build-up in industrial capacity; and increasing pressure from the international marketplace to include the environment as a strategic business factor.

These factors suggest an obvious strategy to effect a "clean revolution." Make sustainable development a national goal. Mainstream the environment as a strategic factor in industrial policy. Encourage the development of an arsenal of government, business, and community actions to change industrial behavior. Make total quality environmental management the hallmark of national industrial culture. Remove the impediments to the transfer of world-best industrial technology and practice. And, open environmental infrastructure to the global capital markets. These actions echo

the transcendent success of the “green revolution,” which included national commitment to improve agriculture, the application of science and technology to traditional production, the extension of best practice to the widest range of producers, and the marriage of public and market incentives to promote change. The Secretariat and US-AEP Field Office believe the strategy remains valid on the basis of its analysis of the factors affecting program performance.

B. Performance Trends

The US-AEP strategy for effecting a “clean industrial revolution” in Asia is divided between a single strategic objective and three intermediate objectives. The former is directed to economy-wide movement in the direction of a “clean industrial revolution” while intermediate objectives are more narrowly directed to the industrial and infrastructure sectors and to the framework for regional cooperation. Following discussions within the ANE Bureau, it is agreed that the FY1999 Results Review will focus on the strategic objective itself and related results. Intermediate objectives will be addressed in discussion of the Management Contract at Part III. This narrower focus and differentiation is intended to bring the US-AEP review closer in line with mission submissions (i.e., with fewer intermediate objectives and fewer indicators for a single strategic objective).

There are four results associated with the strategic objective:

- *increasing investment in environmental technologies;*
- *increasing commitment to corporate environmental management;*
- *industrial environmental performance as a premise for development and environmental policy; and*
- *increasing evidence of institutional, professional, and information linkages between Asia and the United States.*

There is some headway in the direction of each of these results, captured by quantitative indicators. Progress is discussed at Part II. Nevertheless, a brief comment on performance trends is called for in Part I. Illustratively, recent headlines and commentary in the Malaysian press - November, 1996 (see Appendix I) confirm the government’s commitment to “QUALITY GROWTH.” Tun Diam Zainuddin, Economic Advisor to the Government, addressing Malaysia’s commitment to introduce development indicators reflecting environmental concerns, is quoted as follows:

This is because ... indicators, which are principally economic growth, income, and profitability, do not adequately reflect the measures of environmental integrity or human welfare required for sustainable development. ... Moreover, the prevalence of such indicators impedes progress towards sustainable development through systems which both reward and penalize individuals, organizations and communities on the basis of narrow views of what constitute success or failure. ... A move towards sustainable development requires a shift in the basis upon which performance is assessed and ultimately upon which rewards are given or withheld. ... This requires

the use of a more comprehensive framework of sustainable development indicators to focus the attention of decision makers and the public on progress towards sustainability.

This indication of progress is not confined to the Asian “Tigers.” London’s Financial Times recently featured an article on the Philippines (see Appendix I) capturing environmental progress in that country under the caption “GREEN TIGER - AFTER YEARS OF NEGLECT, THE PHILIPPINES IS STARTING TO PROTECT ITS ENVIRONMENT.” Further evidence is found in the Report of a US-AEP Program Development Team to the Philippines - September, 1996, underscoring the breadth of official concern about environmental quality there by reference to the introduction of environmental factors to industrial policy

Indeed, reports from the US-AEP Field Office and the Country Assessments identify and verify the following positive performance trends in North, East, and Southeast Asia, and suggest some evidence that similar trends may be emerging in South Asia.

a. movement up the environmental and technology ladder from pollution control (from even pollution prevention in some countries) in the direction of clean design, technologies, and production;

b. clear recognition of the importance of environmental infrastructure to cleaner production systems;

c. the engagement of an expanding number of institutions in the environmental dialog, for example, including ministries of development, economy, finance, and industry; the S&T and R&D establishment; and the private financial community;

d. promotion and deployment of innovative policies, for example: market and information-based incentives, voluntary compliance schemes, and private sector financing of infrastructure;

e. a firm understanding (perhaps better than in the United States itself) of changing corporate, industrial, financial, and state structures to take account of the environmental opportunities inherent to a globalizing world economy, for example: the role of private ordering arrangements like ISO 14000, “greening of the supplier chain”, and international partnerships;

f. a growing commitment to the idea of environmental stewardship among major firms and industry associations;

g. increasing sensitivity to the role of public awareness and participation in creating a supportive enabling environment for a “clean revolution”; and

h. finally, a firm commitment across the region to the positive role of the private sector and marketplace in international technology development, adaptation, diffusion, cooperation, and transfer.

C. Development Themes

Further, the Five Year Review has already discerned the congruence between these important trends and the development themes imbedded in the US-AEP program:

- ***the emphasis on environmentally sustainable growth and the development potential inherent to the rapid build-up in industrial capacity in Asia*** - these themes reflected in the effort to introduce industrial environmental performance as a development goal and environmental indicator;
- ***the emphasis on technological transformation as the primary strategy for avoiding environmental degradation*** - this theme reflected by the successful “tech rep” program and the increasing attention to identifying and eliminating larger, systemic obstacles to technology cooperation and transfer;
- ***recognition that globalization is changing the nature of the development game, with governance increasingly organized through nontraditional systems*** - this theme reflected by activities directed to private ordering, specifically ISO 14000, “greening the supply chain,” voluntary business standards, “environmental due diligence” by financial institutions, and privatization of environmental infrastructure;
- ***the priority given to intergovernmental, interinstitutional, and international coordination and cooperation*** - this theme reflected by the emphasis on regional context, partnership, and cooperative activity with the Environmental Protection Agency, departments of Commerce and State, Council of State Governments, California Environmental Protection Agency, Air and Waste Management Association, Water & Environment Federation, National Pollution Prevention Roundtable, and APEC; and
- ***the clear commitment to stimulate, promote, and take into account, information and research of high quality and relevance to ensure that the activities of industry, government, the public, and the US-AEP program itself, are consistent with building a sustainable future*** - this theme reflected by the organization of an Asian regional policy network and sponsorship of events with, among others, The Greening of Industry Network.

PART II: PROGRESS TOWARD OBJECTIVES

As noted in Part I, the strategy for the US-AEP program was described in the FY1997 and FY1998 Results Review and Resource Request. That material, while critical to the following analysis, is not repeated herein. Result commitments were defined in the Results Management Plan - October, 1996, and are only summarized below. Tables are included at Section D, below.

A. Performance Analysis

**Strategic Objective Result No. 1:
Increasing Investment in Environmental Technologies**

Indicator: Increased Import of Environmental Technologies as a
Percentage of Total Industrial Imports and Investment

Discussion: There is no reliable or regionally consistent information available to measure industrial environmental performance, pollution intensity, the use of so-called clean technologies, or the sale of domestically-produced environmental technologies. There is, however, information available to measure the import of environmental technologies. Since the greater part of industrial and modern infrastructure technologies are imported, their increasing share in total industrial imports or investments may prove to be a useful proxy for measuring improvements in environmental outcomes.

Using data from the United Nations, the Secretariat observed a 4.23 percent increase in environmental equipment imports as a percentage of total industrial imports between 1993 and 1994 (Results Management Plan - October, 1996). The Secretariat has set a *ten percent annual increase* as the five year objective. The actual growth in environmental equipment imports between 1994 and 1995 was an impressive 19 percent, although there was a decline of 2 percent in environmental imports as a percentage of total industrial imports. Growth in environmental imports ranged from 35 percent in Thailand, to 27 percent in Korea, to the regional average of 19 percent in Indonesia, Malaysia, and Philippines. Whether these results will prove statistically relevant over time will be tested in the statistics for the next two years. *Note:* the period measured (1994-1995) precedes the launch of the more targeted US-AEP development strategy (1995-1996).

Pollution will continue to rise in Asia until the percentage of annual growth in economic output is matched by annual declines in pollution intensity. This puts a premium on a process that reduces environmental damage per unit of output fast enough to outpace production increases. Unfortunately, policy-makers have long regarded technology as inimical to the environment. With environmental problems deepening throughout Asia, and technology advancing rapidly in ways that could reduce pollution and waste, a new understanding needs to be reached so that environmental concerns and economic competitiveness are addressed in tandem - *the very premise of the US-AEP program*. This indicator seeks to measure investment in environmental control technologies and environmental infrastructure as a temporary proxy for pollution intensity.

**Strategic Objective Result No. 2:
Increasing Commitment to Corporate Environmental Management**

Indicator: A composite is proposed: i) presence of a national ISO 14000 accrediting agency and at least one national certifying agency; ii) ten industrial firms ISO 14000 certified by a national certifying agency; and iii) international reciprocity for local certifications.

Discussion: The employment of voluntary standards to promote and measure environmental compliance is important, particularly given the relative weakness of environmental enforcement

throughout Asia. Among the more promising prospects for such standards is ISO 14000. Indeed, ISO 14000 is gaining momentum in Asia as the regional standard for corporate environmental management. To measure the vibrancy of environmental stewardship in country situations, the Secretariat is measuring the extent to which ISO 14000 has taken root in each target country. Part of the measure reflects government and industry-wide commitment to environmental management (e.g., national accrediting and certifying agencies), a part to corporate commitment (as reflected by ISO 14000 certification), and a part to the seriousness or quality of public and private commitments (as reflected by international reciprocity).

Using data gathered by the US-AEP Field Office, and from the Country Assessments, independently verified by Louis Berger, International, the Secretariat observed significant progress during the year, exceeding the target for 1996. Recall that ISO 14000 was only adopted as an international standard in 1996, and most countries (even among the industrialized economies) have yet to establish accrediting organizations. Nevertheless, Malaysia, Singapore, South Korea, Taiwan, and Thailand have established national accreditation or certification bodies, and there are already more than ten firms ISO certified in Malaysia, Singapore, and Taiwan. The US-AEP program itself took an aggressive posture in the standards area during the fiscal year, organizing introductory ISO training programs in five countries, promoting training joint ventures in three countries, linking ANSI (American National Standards Institute) and the U.S. ISO 14000 Governing Committee to the accreditation process in Indonesia, Malaysia, and Philippines, and launching sector-specific work in the areas of chemicals, food processing, pulp and paper, and textiles. Results reporting reflects the impact of these specific inputs, as well as the regional response to growing market pressures.

The Secretariat sees many potential benefits from international environmental management standards. Standards will avoid multiple registrations, inspections, certifications, labels, and conflicting requirements and will provide a single system for firms to implement everywhere they operate. Through harmonization, standards will facilitate international trade and reduce the risk that environmental-related measures are used as pretexts for trade barriers. In addition, they may lessen the pressure on “command and control” regulation, particularly important in Asia. While some firms may implement the standards to project the sincerity and credibility of their commitment to environmental protection, others will use them to help manage and maintain their regulatory compliance posture. Thus, the US-AEP’s interest in the development and adoption of standards has two objectives: first, proactive - aimed at streamlining regulations, fostering commerce, and improving performance; second, defensive - aimed at facilitating legal compliance while avoiding more onerous mandatory environmental requirements.

United States - Asia Environmental Partnership Strategic Objective Tree

AGENCY GOAL:

Protecting the Environment
(Sustainable Development and Economic Growth)

STRATEGIC OBJECTIVE

Promoting an Asian Clean Industrial Revolution*

Strategic Objective Results:

- 1 Increasing Investment in Environmental Technologies
- 2 Increasing Commitment to Corporate Environmental Management
- 3 Increasing Public Policy Concern for Industrial Environmental Performance
- 4 Increasing Evidence of Institutional, Professional and Information Linkages Between Asia and the United States

Intermediate Objective 1

Increasingly Efficient and Less Polluting Industrial Regimes Throughout Asia (CTEM)

Intermediate Objective 3

A Regional Framework that Sustains a Clean Industrial Revolution in Asia

Intermediate Objective 2

Intermediate Results

- 3.1 Important Regional Organizations Promoting Clean Production Concepts in the Region
- 3.2 Asian National Institutions Promoting Clean Production Concepts to other Countries in the Region

Intermediate Results

- 2.1 "Privatization" Concepts Established
- 2.2 Increased Transfer of U.S. Environmental Experience, Practice and Technology

Intermediate Results

- 1.1 Increased Business Reporting, Disclosure and Accountability
- 1.2 Voluntary Business Standards Covering an Increasing Percentage of Industry or GDP
- 1.3 "Greening the Supplier Chain" Concepts Established
- 1.4 Financial Institutions: Environmental Due Diligence Adopted
- 1.5 Strengthened Industrial/Environmental Extension Systems
- 1.6 Increased Transfer of U.S. Environmental Experience, Practice and Technology

*The extensive continuing development and adoption of ever less polluting and more resource efficient products, processes, and services in the Asia Region

**Strategic Objective Result No. 3:
Increasing Public Policy Concern with Industrial Environmental Performance**

Indicator: A composite is proposed: i) ongoing research directed to industrial environmental performance; ii) industrial environmental performance indicators included in official publications and reports; and iii) public policy (i.e., actual regulations or incentives) directed to promoting industrial clean production.

Discussion: The objective is to promote a paradigm shift (i.e., mainstreaming environmental quality in development, economic, and industrial policy) by organizing environmental and cleaner production policies around industrial environmental performance goals and indicators (adding to ambient measures), most probably based on pollution intensity measurements. While there may be some activity directed to environmental policy *per se* (e.g., incorporating market-based approaches into environmental policies, including reference to technology choice in EIAs, etc.), the clear focus is on industrial and related economic policy.

Using data gathered by the US-AEP Field Office and from the Country Assessments, and independently verified by the International Resource Group (IRG) and Winrock International, the Secretariat observed significant progress during the year, meeting its initial target for 1996. The US-AEP program took several concrete steps to move this agenda forward during the fiscal year. First, the Secretariat completed negotiations with the National Academy of Engineering (NAE) to promote measurement work related to industrial environmental performance. This work will be carried out as part of the U.S. contribution to APEC. Second, the US-AEP Field Office laid the ground-work for developing ASEAN-relevant industrial data (e.g., PROPER in Indonesia) and is organizing a policy-oriented professional network in the region to support that work and to advocate for a redefinition of environmental performance (e.g., regional conference linked to an HIID Workshop in Bangkok - February, 1997). And, third, the Secretariat, in collaboration with the International Resources Group (IRG) and Winrock International, is developing a presentational model (along the lines of the RAPID population model) to use as a policy advocacy tool.

Most countries in Asia have little or no reliable information about their own pollution. Some system needs to be developed to take into account the fact that industrial pollution is heavily affected by the scale of industrial activity, its sectoral composition, and the process technologies which are employed in production (this in addition to ambient data). Although most developing countries have little or no industrial pollution data, many have relatively detailed industry survey information on employment, value added, and output. And some countries, like Indonesia and Philippines are engaging with the World Bank and US-AEP to expand the collection and quality of that data. The US-AEP is working with these countries to convert this information to the best possible profile of associated pollutant output, and in turn, with the National Academy of Engineering (NAE) to convert that data into new measures of industrial environmental performance. Hopefully, those measures will then be used in establishing industrial policy goals and as environmental indicators.

**Strategic Objective Result No. 4:
Increasing Evidence of Institutional, Professional,
and Information Linkages Between Asia and the United States**

Indicator: A composite is proposed: i) free-standing environmental information centers established; ii) U.S. environmental policy newsletters, home pages, and professional publications widely-circulating or widely-used; iii) federal or state-level linkages with Asian public environmental protection or industrial agencies; and iv) institutional relationships engaging U.S. nongovernmental organizations, research organizations, or universities.

Discussion: The importance of international partnership to a *change agenda* is underscored by the evolution of the world economy, driven by globalization, integration, and liberalization. Partnership, of course, is a core idea informing the US-AEP. All of its activities attempt to create new linkages between institutions and individuals from the United States and counterparts in the Asia region, whether governmental, corporate, multilateral, or non-governmental. Many promote cooperative undertakings that link firms in common endeavors. Most promote schemes for connecting information, technology, and capital with needs. All are informed by the belief that technological change and environmental improvement can be profoundly complementary goals, each reinforcing the need for and the pace of the other.

The US-AEP program embraces two different, but complementary, approaches to international technology cooperation and transfer. The first works at the transactional level and is measured by an indicator for Intermediate Objective 1, Result 6 (discussed later in this request). Barriers of distance and culture must be scaled in all international transactions. These difficulties are magnified where markets, information sources, and the means of matching potential partners are poorly developed. Although a number of intermediary institutions exist to facilitate international trade and investment - Japanese trading companies being the prime example - few focus explicitly on environmental technology. Fewer still foster long-term cooperative relationships, as opposed to the short-term sales of goods and services. The technology representation, trade-lead, and technology demonstration initiatives championed by the US-AEP, Global Bureau, U.S. Department of Commerce (DOC), and National Association of State Development Agencies (NASDA) represent a focused effort to link trade promotion with longer-term cooperative linkages between U.S. and Asian firms using normal commercial channels.

The second approach (the subject of Strategic Objective, Result 4) is concerned with larger, systemic failures in the international market system, characterized by the paucity of information about technological alternatives throughout the Asia region, the near total absence of continuing education and professional association, and a chronic shortage of funds to underwrite the international transfer of environmental and innovative clean technologies. Resolution of these market failures requires new forms of interaction among governments, private firms, multilateral institutions, and non-government organizations. To be effective, these reconfigured relationships - *partnerships* - must be based on mutual interests and sensitivity to the particular needs of participating institutions, especially those of the Asian countries

The specification and measurement of results has proved more vexing than anticipated. As noted later, sales as a measure for transactional systems is not entirely satisfactory. And, the specification and measure of institutional, professional, and information linkages is proving equally difficult. While these longer-term partnerships are critically important to a “clean industrial revolution,” the Secretariat must inter-relate the concern for partnership with other result commitments in the areas of environmental and industrial standards, etc. This task will make a major claim on management attention in 1997, with the Institute of International Education (IIE) taking the lead to refine the result and measures. It is agreed, however, to qualify, partnerships must be between important organizations, relate to a US-AEP results area, reflect substantive engagement in a target country, and have a long term sustainability objective and plan.

While the Secretariat has not completed the baseline calculation for this objective, it has made significant progress in the partnership arena during the past year. New agreements were reached with the Council of State Governments (CSG), as a multiplier organization for state-based linkages, and the California Environmental Protection Agency (CalEPA). Under the CSG program, the State of Minnesota, for example, is working with in the Philippines to develop a solid waste plan at Manila’s major industrial location. The activity engages the state environmental agency, the University of Minnesota, and private environmental consulting organizations. The Air and Waste Management Association (AMWA) and Water & Environment Federation (WEF) have established institutional presence in five countries, and the National Pollution Prevention Roundtable (NPPR) launched a similar effort.

Combining both institutional and US-AEP management goals, the American Consulting Engineers Council (ACEC) agreed to establish a presence in Asia and to assume technical support for US-AEP’s infrastructure strategy. This is an important first step in the direction of a “sunset” strategy for the US-AEP. Discussions along similar lines are proceeding (albeit still at an early stage) with McGraw-Hill with regard to both information dissemination and technology representation. The US-AEP also completed an understanding with United Technologies Corporation (UTC) to work on supply chain opportunities. Similar initiatives are being discussed with other multinationals, related to an environmental charter for agro-industry and electronics manufacture in Asia. And, finally, in this list of highlights, the US-AEP opened three information centers (in Jakarta, Manila, and Singapore) and will be evaluating that experience in 1997.

This results area is also responsive to the pressing need for new approaches to development promotion in the advanced-developing or modernizing countries of the Asia region. Technology transfer in the narrow sense - the passive acceptance of technology developed elsewhere - is neither feasible nor effective. To the extent that the traditional paradigm of official development assistance and concessional finance relies on this model, it will not succeed. Yet, new mechanisms being developed and tested throughout USAID (including, but not limited to the US-AEP program), face a host of difficulties. Differing economic and environmental perceptions and priorities both between and within developed and modernizing countries frustrate coordinated action, and the goal of technological change must be reconciled with concerns about international trade and economic competitiveness. In FY1997, the Secretariat will wrestle with these issues and opportunities, complete the baseline, and develop related strategies and workplans for the result indicator.

B. Measuring Results

A question frequently asked about the performance of the US-AEP: *is the environment in Asia any better than before? Are ambient conditions improving?* They probably are not. Indeed, if the current pace and pattern of industrial growth continue, they are apt to worsen over the next several decades. It is this reality that informs the strategic approach of the US-AEP.

Industrial pollution issues in Asia are directly related to the pace and pattern of past industrial growth, and likely future trends. Recent development has been led by rapid growth of manufacturing output. Most of the industrial expansion has taken place without regard to the environment and has led to serious environmental degradation. This is increasingly evident in the form of contaminated water, air and land, adverse health impacts, and damage to both “downstream” activities, and coastal and marine ecosystems. In broad terms, these impacts can be traced to industrial pollutants of three major types: traditional water pollutants (e.g., biochemical oxygen demand and suspended solids), traditional air pollutants (e.g., particulates, sulphur and nitrogen oxides, and carbon monoxide), and toxic and hazardous waste (e.g., bio-accumulative metals).

Total pollution, of course, depends on the combination of pollution intensities per unit of output and the scale of the output produced. It is only by reducing pollution intensity that the total pollution load can be reduced while maintaining industrial sector growth (i.e., the region’s twin development goals). This can be achieved either by reducing the pollution intensity of individual sectors (e.g., pollution control, pollution prevention, technological change - the environmental/ technology ladder), or by altering the sectoral composition of production (e.g., through industrial policy). While shifts in sectoral composition may well reduce the aggregate pollution intensity of manufacturing, the effect in Asia will most likely be offset by the rapid growth of industrial output - projected to continue for the next several decades. The World Bank points out that even for particulates, toxics, and BOD, for which declining pollution intensities are projected, the total pollution load will continue to grow at an accelerating rate throughout the region, up to the year 2010.

This puts the burden on environmental policies, industrial practice, and technological change, and defines the premise for the US-AEP’s strategic priorities. Interestingly, coming late to the challenges of industrial pollution carries with it enormous advantage - not the least of which is the opportunity to learn from the mistakes of others. Asia has other advantages as well. The rapid growth of investment carries with it the opportunity to build a new industrial infrastructure, to guide the location of new industrial firms, and to take advantage of cleaner technology designed to meet the more rigorous environmental standards of the industrialized countries. And there is no entrenched bureaucracy committed to one approach over another. Thus, there is wide scope for progress.

As noted in earlier strategy documents, there are two key industrial/environmental issues: first, what to do about pollution from existing firms; and second, how to delink future pollution loads, and the damage they may cause, from the rapid expansion of industrial output. The first is important, given the current levels of pollution from industry, but the second is the more critical issue (and opportunity). By the year 2010, assuming continued rapid growth, existing firms will represent only 15 percent of total industrial output and, by the year 2020, less than eight percent. The major issue in both cases is how to achieve the optimal level of pollution control at the least cost. The choice of policies and instruments, and how they are used, will determine the success or failure of the effort. The task, then, is a *development task*, the success of which is to be measured in terms of political and institutional progress. The US-AEP Secretariat and Field Office believe it has identified an appropriate set of indicators to measure progress (Results Management Plan - October, 1996) and that program results will be achieved as planned.

C. Expected Progress Through FY 1999 Management Actions

The US-AEP program is designed as a catalyst to action. Its ambition is to mainstream a concern for environmental quality in public and corporate policy and practice throughout the region - *a critical development objective* - not to reach a certain ambient environmental condition by a certain date in a certain place (impossible to either project or achieve in the Asian circumstance). The strategy targets key public policies, corporate practices, and bottlenecks to technology cooperation and transfer. Taking account of the factors affecting performance (described above), the program strategy (described in the FY1997 and FY1998 Results Review), the management and structure of the program (described in the Results Management Plan - October, 1996, Customer Service Plan - November, 1996), and progress to date (as reflected by the indicators), the Secretariat and US-AEP Field Office believe that progress will continue in a satisfactory manner.

During the past fiscal year, the Secretariat and US-AEP Field Office completed a thorough assessment of the environmental infrastructure sector and reformulated the strategy and activities (A Strategy for the US-AEP and Infrastructure in Asia - November, 1996), putting emphasis on closer working relationships with potential investors and system operators, development of an institutional partnership with the American Consulting Engineers Council (ACEC), and a tighter definition of its policy agenda (i.e., privatization). The strategy was discussed with the full range of potential “customers” including open meetings in Washington, D.C., California, and Philippines. During the next fiscal year, the Secretariat will undertake a similar assessment of its technology transfer strategy and activities.

While the Secretariat and US-AEP Field Office believe they have identified an appropriate set of indicators to measure progress (Results Management Plan - October, 1996) and that program results will be achieved as planned, they have, nevertheless, undertaken to reassess the basic premises of the program and its results commitments. At the direction of the Assistant Administrator, ANE, the Secretariat has organized a Five Year Review, to be completed in the Spring, 1997. The review is intended to gauge the import of the development problem (i.e., the idea of a “clean revolution”), the centrality of technology transfer to the program premise, the need for continuing engagement in nonpresence countries, and both the significance and effectiveness of the partnership approach.

The Review is being undertaken by a panel, including *Stuart Hart*, Director of the Corporate Environmental Management Program at the University of Michigan, a writer on the “greening of American business”; *Kurt Fisher*, Clark University, author of Environmental Strategies for Industry, Coordinator of The Greening of Industry Network; *George Heaton*, Worcester Polytechnic Institute and World Resources Institute, a writer in the area of technology policy and the environment, Missing Links, Transforming Technology; *Richard Blue*, recently with The Asia Foundation, earlier USAID itself, an expert on development in the Asia region, and on the evolution and direction of development promotion by the international community; and *Lyuba Zarsky*, the Nautilus Institute for Security and Sustainable Development, a writer in the area of “trade and aid,” member of the U.S. delegation to the first meeting of APEC environmental ministers, and commentator on the collaboration between Asian countries and the United States in the areas of the environment and sustainable development. The principal investigator is *Amit Bando*, Senior Economist at Resource Management International, and consultant to the Asian Development Bank, World Bank, and Asian governments in the areas of environmental policy and international development cooperation. A very brief summary of the questions to be addressed by the review panel follows:

1. Development Problem: The US-AEP program argues there is an important opportunity to affect the environmental consequences of rapid industrial growth, indeed, to define a new more sustainable development paradigm for the region (i.e., a “clean revolution”). The questions are whether realistically there is such an opportunity, whether it is best defined by the region or can be more narrowly defined by country, and whether the US-AEP itself is significantly engaged.

2. Trade and Aid: The development problem and program goal are defined in technological terms. The questions for the Review are whether technology transfer between the United States and Asia is fundamentally important to meeting the development goal (i.e., the synergy between trade and aid), whether there is an important regional agenda (commercial or development, as distinguished from country agendas), and whether the US-AEP itself has something distinctive to contribute to technology transfer (as distinguished from the DOC, Ex-Im, TDA, OPIC, etc.).

3. Country or Regional Focus: The US-AEP program targets ten countries in the Asia region, six of which are designated “nonpresence countries” and four of which are designated “presence countries”. The questions for the review are whether engagement in the “nonpresence countries” is fundamentally important to achieving the program goal (commercial and development), whether there ought to be differential rules of engagement as between “presence” and “nonpresence” countries, and whether there ought to be differential program levels as between the two categories.

4. Development Promotion: Given the high economic status of most of the countries in the region, and the improving development status of others, and given the prominent role of the private sector in the industrial sector and technology transfer, the US-AEP has fashioned an innovative approach to development promotion - an approach relying heavily on mutuality of interest, cost-sharing, and partnership. The questions for the Review are whether the approach is, in fact, achieving significant savings compared with more traditional approaches to development promotion, whether the approach is leveraging important commercial and development outcomes, and whether the approach suggests a model for development promotion among modernizing countries in other regions.

As noted above, the Secretariat will also complete the baselines, strategy, and workplan for SO, Result 4 and IO 3, Result No. 2 early in 1997. This, together with the Five Year Review, constitutes the major analytic tasks for FY1997. Management attention will then be directed to implementation and to the further strengthening of oversight and control systems.

The Secretariat and US-AEP Field Office continue their regular review of program performance and management structure (most recently, January 21-23, 1997). Based on these reviews, and expected progress through FY1999, the following actions have been taken already in FY1997:

a. reorganization of USAID oversight around objectives, results, and indicators; the review of activities and contracts continuing in the context of regular vulnerability and control assessments;

b. reorganization of the US-AEP activity portfolio into twelve management units, with related institutional and personnel assignments (see Appendix IV);

c. appointment of professional component leaders for technology transfer and international partnership objectives;

d. reorganization and staffing of the Berger contract to reflect objectives, results, and indicators; similar work launched with other partner organizations (e.g., Council of State Governments, etc.);

e. further definition and delegation of management responsibilities within the US-AEP Secretariat, and reorganization of coordinating mechanisms among partner organizations; and

f. exploration of staff exchange and supplementation opportunities with partner organizations (including federal government partners).

Three important management issues remain. First, the Secretariat, is working closely with the Assistant Administrator, ANE, to reinvigorate interagency coordinating mechanisms. This is particularly timely with the organization of the new administration. Progress in this area is already reflected in the recent APEC experience, and discussions are proceeding with the Department of Commerce (DOC) with regard to personnel assignments to the Secretariat. Second, the Secretariat is looking carefully at its institutional posture in the region. After making considerable strides over the period 1994-1996 to strengthen its overseas presence and relationships, USAID, in response to budget pressures, has determined to close the US-AEP Field Office in the Summer, 1997. Only one of three USAID missions (India) has maintained its bilateral program in the industrial environmental area, undercutting another promising opportunity to strengthen regional presence. Further affecting its regional posture, the U.S. Department of Commerce is taking greater ownership (and budget responsibility) for the US-AEP technology representatives. It would be difficult to overestimate the loss that the closing of the Manila Field Office will cause in terms of intellectual, management, and representational capacity. The Secretariat is examining these developments for its field presence and will have recommendations later in the Spring, 1997. Third, the Secretariat is developing a plan to broaden and deepen its partnership and outreach activity, including that part of the activity which informed it and its partners of continuing developments in the industrial environmental arena here in the United States, in Asia, and globally.

It may also be important to underscore a conceptual issue for the US-AEP program. While directed to Agency environmental goals, the program is even more immediately concerned with the economic growth process in Asia and the implications of that growth for sustainable development. As a result, the Secretariat's analytic attention is increasingly directed to the subtle interplay between government regulation, public pressure, the economic goals of firms, and technology, and to the growing tendency among investors, insurers, industrial and worker associations, user firms, and consumers to integrate environmental concerns into their activities. Our analysis suggests that, in the future, firms will be confronted with an ever-widening range of environmental pressures from many more sources and that these pressures at the local, national, regional, and global levels constitute the premise for a "clean industrial revolution" in Asia. The Secretariat believes that this insight defines a leadership opportunity for USAID in the region - assisting firms to shift from defensive strategies in response to environmental regulation to more innovative strategies to ensure environmental quality. This

development orientation underlies the work, and success, of the US-AEP program over the past two years. Yet, it is not fully understood or appreciated, many preferring to see a more traditional pollution prevention or trade promotion activity. As the Agency considers management alternatives for the US-AEP, it will be important to maintain this conceptual vision of the program.

C. Performance Data Tables

See following four pages.

UNITED STATES - ASIA ENVIRONMENTAL PARTNERSHIP				2/1997
STRATEGIC OBJECTIVE: Promote An Asian Clean Industrial Revolution				
SO Result 1: Increasing Investment in Environmental Technologies				Manager: Baldwin
Unit of Measure: increased import of environmental technologies as a percentage of total industrial imports and investment		Year	Planned	Actual
<p>Sources: United Nations International Trade Branch Commodity Trade Statistics (COMTRADE)</p> <p>Comments: Pollution intensity and ambient information is not available. Therefore, we need proxies for environmental performance in the industrial and infrastructure sectors.</p> <p>There is reliable (and regionally consistent) information for the import of environmental technologies (including environmental infrastructure). There is no comparable information for so-called clean technologies. Since the greater part of industrial and modern infrastructure technologies will be imported, their increasing share of total industrial imports or investment could stand as a proxy for industrial performance, and industrial performance as a proxy for improving environmental outcomes.</p> <p>Definition: Percentage increase in the relationship between environmental equipment imports and total industrial imports.</p> <p>Frequency of Data Collection: Annually. Targets are annual and not cumulative.</p> <p>Assumptions: Does not include environmental services or dual use process equipment.</p>	Baseline	1995	NA	4.23
	Target	1996	5%	-3.20
	Target	1997	6%	
	Target	1998	7%	
	Target	1999	8%	
	Target	2000	10%	
	<p>Note: While environmental imports did not increase as a percentage of total industrial imports, the actual growth in environmental imports was an impressive 19 percent. Note, also, that the period measured (1994 - 1995) precedes the launch of the more targeted US-AEP development strategy (1995- 1996).</p>			

UNITED STATES - ASIA ENVIRONMENTAL PARTNERSHIP				2/1997
STRATEGIC OBJECTIVE: Promote An Asian Clean Industrial Revolution				
SO Result 2: Increasing Commitment to Corporate Environmental Management				Manager: Haines
Unit of Measure: A composite is proposed: i) presence of national ISO 14000 accrediting agency and at least one national certifying agency; ii) ten industrial firms ISO 14000 certified by a national certifying agency; and iii) international reciprocity for local certifications.		Year	Planned	Actual
Sources: Survey by Technology Representatives Comments: ISO 14000 is gaining momentum as an international standard for corporate environmental management. To measure the robustness of the environmental management ethic, we propose to measure the extent to which ISO 14000 has taken root in each target country. Part of the measure reflects government and association commitment to environmental management (e.g., national accrediting and certifying agencies), a part to corporate commitment (as reflected by ISO 14000 certification), and a part to the seriousness or quality of public and private commitments (as reflected by international reciprocity). Definition: Self-explanatory. Frequency of Data Collection: Annually. Targets are cumulative. Assumptions:	Baseline	1995	N/A	0 pts.
	Target	1996	5 pts.	8 pts.
	Target	1997	15 pts.	
	Target	1998	20 pts.	
	Target	1999	25 pts.	
	Target	2000	30 pts.	
	Note: Accreditation or certifying agencies established in Malaysia, Singapore, South Korea, Taiwan and Thailand. Ten or more firms ISO certified in Malaysia, Singapore, and Taiwan.			

UNITED STATES - ASIA ENVIRONMENTAL PARTNERSHIP				2/1997
STRATEGIC OBJECTIVE: Promote An Asian Clean Industrial Revolution				
SO Result 3: Increasing Public Policy Concern with Industrial Environmental Performance				Manager: Baldwin
Unit of Measure: An index (1-6) is proposed: i) ongoing research directed to industrial environmental performance (1 point); ii) industrial environmental performance indicators included in official publications and reports (2 points); and iii) public policy (i.e., actual regulations or incentives) directed to promoting industrial clean production (3 points).		Year	Planned	Actual
<p>Sources: Central industrial and economic planning ministries of each country; published reports by these ministries.</p> <p>Comments: The idea here is to get at a paradigm shift (i.e., the main streaming of environmental quality in development, economic, and industrial policy), organizing environmental/cleaner production policies around industrial environmental performance (moving away from, or adding to, ambient measures). While there may be some activity directed to environmental policy per se (e.g., incorporating market-based approaches into environmental policies, including technology choice in EIAs, etc.), the clear focus is on industrial and related economic policy.</p> <p>Definition: i) Ongoing research directed to industrial environmental performance: Central industrial and economic planning ministries (which could include R&D institutes) have continuing programs in place to benchmark industrial environmental performance (e.g., pollution intensity, methodologies for identifying tracking clean technology investments, etc.)</p> <p>ii) Industrial environmental performance indicators included in official publications and reports: Measures of environmental performance are provided by central industrial and economic planning ministries in their regular reports on economic performance.</p> <p>iii) Public policy directed to promoting industrial clean production: Incentives and regulations are in place to “mainstream” environmental performance and investment in clean technology.</p> <p>Frequency of Data Collection: Annually. Targets are cumulative.</p> <p>Assumptions: This indicator is intended to monitor the progress of central industrial and economic planning ministries in “main streaming” environmental considerations into their programs and policies.</p>	Baseline	1995	N/A	3 pts.
	Target	1996	5 pts.	6 pts.
	Target	1997	15 pts.	
	Target	1998	20 pts.	
	Target	1999	25 pts.	
	Target	2000	30 pts.	
	Note: Points reduced from 10 to 1, 20 to 2, and 30 to 3. The rationale for the change is to eliminate qualitative judgement. Ongoing research in South Korea, Malaysia, Singapore, and Taiwan. Information published in Singapore.			

UNITED STATES - ASIA ENVIRONMENTAL PARTNERSHIP				2/1997
STRATEGIC OBJECTIVE: Promote An Asian Clean Industrial Revolution				
SO Result 4: Increasing Evidence of Institutional, Professional and Information Linkages between Asia and the United States				Manager: Gordon
Unit of Measure: 1) An index (10 points) is proposed: i) free-standing environmental information centers established (1 point); ii) U.S. environmental policy newsletters, home pages, and commercial/technical/professional publications widely-circulating or widely-used (2 points); iii) federal or state-level long-term institutional linkages with Asian public environmental protection and/or industrial agencies (3 points); and iv) long-term institutional relationships engaging U.S. non-governmental organizations, research organizations, or universities (4 points).		Year	Planned	Actual
Sources: Survey by Technology Representatives. Comments: Process requires a mix of qualitative and quantitative judgement to be reviewed by an inter-project committee and approved by the Director. Definition: Partnerships and information systems are intended to support (exclusively) SO and IO results and indicators. In other words, they are intended as license to open new areas of program activity. To qualify, the partnerships must be between important organizations, reflect substantive engagement in the target country, and have a long-term sustainability objective and plan. It is agreed that ii) above will require qualitative judgment (to be based on the advice, among others, of the tech reps). Frequency of Data Collection: Annually. Targets are cumulative. Assumptions: That international linkages are essential to a clean revolution.	Baseline	1995	N/A	15 pts.
	Target	1996	20 pts.	
	Target	1997	30 pts.	
	Target	1998	50 pts.	
	Target	1999	75 pts.	
	Target	2000	100 pts.	
Note: Baseline not complete. Major management issue for FY 1997.				

PART III: STATUS OF THE MANAGEMENT CONTRACT

During the fiscal year, the Secretariat completed all pending actions called for in its Management Contract: specifically, the Results Management Plan, Customer Service Plan, and Country Assessments for each of the ten target countries. A summary paper for the Country Assessments is complete and available. In addition, program development plans were completed in three presence countries (i.e., India, Indonesia, and Philippines), each reflecting program direction and proposed understandings between the USAID field mission, the Secretariat, and the US-AEP Field Office. As noted above, the Secretariat also completed an assessment of its infrastructure strategy and activities. The Secretariat did not complete a formal or written understanding with the Environment Center, but, as noted earlier, the relationship has evolved into a close working partnership. Both the Center and Secretariat believe the thrust of the directed action is accomplished.

As part of the Management Contract, the Secretariat agreed to organize program activities around three intermediate objectives (ten intermediate results), directed to the industrial and infrastructure sectors and to the framework for regional cooperation. Progress is summarized below, and performance data tables are included at Appendix II. To give some feel for the vibrancy of the program, a review of environmental exchanges organized by the Institute for International Education (IIE) is included at Appendix III.

Intermediate Objective No. 1: Increasingly Efficient and Less Polluting Industrial Regimes

Indicators:

1. Increased Business Reporting, Disclosure and Accountability
2. Voluntary Standards Covering an Increasing Percentage of Industry
3. "Greening the Supplier Chain" Concepts Established
4. Financial Institutions: Environmental Due Diligence Adopted
5. Strengthened Industrial Extension/Information Systems
6. Increased Transfer of U.S. Environmental Experience, Practice and Technology

Discussion: Attention to the first indicator was organized during FY1996, and activity implementation is on-track for FY1997. Specifically, the Secretariat is committed to promoting an information-based policy initiative in Indonesia, PROPER, proposing to expand both the number of pollutants and firms covered by the system. The Secretariat is also committed to a parallel system in Philippines (work already underway, supported by the World Bank). These two country programs, promoted by the US-AEP Field Office, constitute a major commitment and will serve as the platform for further elaboration throughout the region under the auspices of both APEC and ASEAN. Data developed through the programs will contribute to the development of new performance indices and related policy innovations. The data will also serve as the basis for the development of an industrial/environmental presentation model along the lines of the successful RAPID system, developed earlier by USAID to promote a family planning agenda in the region.

In collaboration with the US-AEP Field Office and Winrock International, the Secretariat is developing a “policy menu” to assist economic and industry agencies in Asia to deepen and broaden the pressures for environmental quality emerging in the region. This work requires a better understanding of the firm and industrial ecology in Asia and the emerging pressures for environmental quality. To this end, the US-AEP is also exploring opportunities to promote the organization of an Asian policy network and to expand the reach of The Greening of Industry Network.

As discussed earlier, the US-AEP, and particularly the US-AEP Field Office, is giving major attention to ISO 14000. In addition, indeed more significantly in terms of both activity and management attention, under the second indicator, the Secretariat is working with U.S. industrial associations to promote sectoral environmental standards (e.g., “responsible care” for the chemical industry). Specifically, the US-AEP is working with the American Pulp and Paper Institute (TAPI) to promote the adoption of an environmental charter for the sector in Asia (starting in Indonesia) and with the U.S. Department of Agriculture, the U.S. Food Processors Association, and the EPCOT Center in Orlando to develop an environmental charter for that sector in the region. The plan is to have an environmental charter in place for each of the major industrial sectors in the region within a five year time frame.

Under the third result commitment, the US-AEP is trying to work the supply chain back to affect the environmental performance of suppliers to major national and multinational firms. Work with the California-based Business for Social Responsibility (BSR) is continuing. BSR and the US-AEP are engaged with The GAP to develop effluent standards for Asian suppliers to the U.S. apparel industry. The US-AEP, through its partner Louis Berger International, has also signed a memorandum of understanding with United Technologies Corporation (UTC) to champion an aggressive environmental supply chain initiative in Malaysia. This is particularly important because it suggests a cost-effective alternative to the plant-by-plant assessment approach taken by the earlier EIP activity with the ASEAN Secretariat.

The US-AEP Field Office in Manila has given major attention to the fourth result commitment. The office in Manila has worked with one of the largest and most progressive banks in the Philippines, the LandBank, to promote corporate environmental management. The Bank has a close relationship with the Department of Environment and Natural Resources (DENR). They had been working collaboratively on alternatives to monitor and approve investment and environmental clearances, but in interaction with US-AEP came to realize they needed to improve their own analytical and monitoring capacity. US-AEP sent core staff to a comparable unit at the Bank of America (BOA) in California where they worked side-by-side with counterparts. The team then came back and reorganized their own unit. During the fiscal year. The LandBank initialed an agreement with the World Bank to distribute CFC-reduction grants under the Global Environmental Facility. More important, they initialed an agreement with DENR that redelegated to them the authority to conduct environmental appraisals and to sign-off on required environmental clearance certificates. This is the first instance in Asia where an environmental ministry has extended such authority to a third party. The Philippines effort has been showcased to the Asian Development Bank for regional replication. Comparable initiatives are planned for India, Thailand, and Indonesia.

The promotion of environmental management concepts has proved daunting. USAID itself used the “factory audit” approach for some time, but it is a limited tool proved expensive. The extension idea (the fifth intermediate result) seems to have more promise, although there is no neat “service” model as there was for agriculture. The US-AEP engaged the National Pollution Prevention Roundtable (NPPR) in 1996 as a partner organization in an effort to launch an industrial environmental extension base in each target country, and discussions continue with the Electric Power Research Institute (EPRI). Finally, in this area, and in collaboration with USAID India, the US-AEP is working with the Federation of Indian Chambers of Commerce (FICCI) and the National Productivity Council (NPC) to launch a combined extension/information activity in five states.

Finally, with regard to the sixth result, US-AEP initiative continues. The technology representation, trade-lead, and technology demonstration initiatives championed by the US-AEP, Global Bureau, U.S. Department of Commerce (DOC), and National Association of State Development Agencies (NASDA) represent a focused effort to link trade promotion with longer-term cooperative linkages between U.S. and Asian firms using normal commercial channels. Total technology sales resulting from US-AEP engagement are in excess of \$500 million, representing almost 42 percent of total U.S. environmental exports to the region. U.S. exports account for roughly 25 percent of Asian environmental imports. This extraordinary performance is partly attributable to increased demand, partly to more aggressive export promotion, but significantly also to US-AEP interventions to promote long-term cooperative relationships in the areas of training, information, and the flow of capital. As noted above, the US-AEP Secretariat will undertake a more careful assessment of performance and opportunities during FY1997. A major challenge for FY1997, and beyond, will be to incorporate clean process technologies within the program, deciding where to draw the line on sectoral and technology choice, examining whether any of the current US-AEP tools will be applicable to this new area, and building relationships with new partner organizations.

Intermediate Objective No. 2: Increase in the Stock of Environmental Infrastructure

Indicators:

1. “Privatization” concepts established
2. Increased Transfer of U.S. Environmental Experience, Practice and Technology

Discussion: The US-AEP completed a fundamental reassessment of work in this sectoral area during 1996. As a result, a new program strategy and workplan have been developed. Most significantly, the Secretariat reorganized its technology transfer work by a closer affiliation with the industry. Working closely with the American Consulting Engineer’s Council (ACEC), the Secretariat sponsored customer-oriented workshops in Washington, D.C., California, and Philippines to develop a strategic plan. Drawing from those sessions, ACEC agreed to assume much of the operational responsibility for trade promotion in the environmental infrastructure arena (to its own account, albeit over a five year time frame). Full-time staff will be assigned in India, Indonesia, Philippines, and

Thailand. ACEC will also open an office in the region. Awards for environmental infrastructure with total project values exceeding \$500 million were recorded for United States prime contractors in 1996.

Attention was also paid to the question of privatization and the role that the US-AEP program might play. USAID field missions and Global's Environment Center have significant engagement in this area, and it is agreed that the US-AEP needs to work more closely with those efforts. To that end, the Secretariat is planning a workshop to engage the field contractors and Global Bureau to identify opportunities for "regionalizing" those country efforts. National champions from India (Infrastructure Finance Corporation), Indonesia (Ministry of Home Affairs), Philippines (BOT Center), and Thailand (Provincial Water Authority) will also participate.

Intermediate Objective No. 3
A Regional Framework that Sustains a "Clean Revolution" in Asia

Indicators:

1. Important Regional Organizations Promoting Clean Production Concepts in the Region
2. Asian National Institutions Promoting Clean Production Concepts to other Countries in the Region

Discussion: The US-AEP has completed its baseline for the first indicator, not for the second. While each of the key regional organizations is engaged to some extent in promoting clean production, their agendas are not as sharply defined as the US-AEP's "clean revolution" target. During the past year, there was an important success with APEC, U.S. representatives promoting the US-AEP strategic framework to the Ministerial for Sustainable Development. The Secretariat also engaged the World Bank through its new activity in Indonesia and Philippines (i.e., PROPER and EcoWatch) and in the development of a presentational model. Work originated under EIP continues with ASEAN. The Secretariat plans to use the Five Year Review as a vehicle for opening a more focused engagement with the Asian Development Bank.

Less progress was made in working with individual country institutions in promoting a regional agenda. The Country Assessments suggest a range of opportunity, but a baseline, strategy, and workplan will be developed in FY1997.

PART IV: RESOURCE REQUEST

A. Financial Plan

As noted above, the Secretariat has reorganized the US-AEP activity portfolio into twelve management units (see pg. 19, Results Review above, and Appendix IV). Activities are aggregated into three budgetary categories reflecting the approved strategy. For FY1997, the estimated budget is \$14.6 million - 22 percent allocated to policy, 28 allocated to capacity, and 32 percent allocated to technology transfer. The earmark of \$2.6 million for biodiversity represents 18 percent.

The planning level for FY1998 is \$20.0 million, reflecting 27 percent allocated to policy, 25 percent allocated to capacity, 36 percent allocated to technology transfer and about nine percent, \$1.975 million, allocated to the biodiversity earmark. The request level for FY1999 is \$19.0 million, reflecting 27 percent allocated to policy, 26 percent allocated to capacity, and 26 percent allocated to technology transfer. There is no earmark for biodiversity in FY1999.

B. Prioritization of Objectives

Although the US-AEP program encompasses only a single objective, the Secretariat prioritizes within its planning levels. Four major programs would be subject to reductions if planning and request levels are not achieved, three in the policy area and one in the technology transfer area. As noted in the FY1999 Results Review, the Secretariat took a step beyond its more traditional catalytic role by considering major project-like interventions in the areas of performance measurement, disclosure and accountability, and policy research. These project-like activities represent an evolution in Secretariat thinking about development promotion, but also reflect concern about the backing-out of these areas by the missions in Indonesia and Philippines. Alternatively, or in addition, the Secretariat would take a much harder look at the technology demonstration fund managed by NASDA to determine whether that program should be scaled back after seven years of operation.

C. Linkage to Global and Field Programs

There are three dimensions to the relationship with the Global Bureau. First, the Secretariat and Environment Center have tried to coordinate their respective programs, reflected by work in Indonesia relating the US-AEP program and EP3 project there. Note, EP3 is the major Environment Center project in the industrial area. Coordination in the urban area related to infrastructure was most evident in the India context, where the Secretariat and Environment Center organized joint missions to develop the Clean Technology Initiative (CTI) with the USAID mission there. The Secretariat was less successful in linking the US-AEP program to the Economic Growth Center, although both offices are well acquainted and abreast of each other's work.

Second, there are two areas where the Secretariat is using Environment Center contracts and cooperative agreements. In the area of technical support, the Secretariat has used the TERI Cooperative Agreement, as well as the older EPAT and MSI contracts and the newer EPIQ contracts. In FY 1998 and FY1999, the Secretariat plans to continue engaging technical support through the EPIQ contract. The Secretariat has also been able to engage staff to support the Environmental Technology Network for Asia (ETNA) through the Global Bureau's Center for Trade and Investment Services (CTIS).

Third, the ANE Bureau has allocated resources to the biodiversity earmark through the Global Bureau, reflecting the management decision to restrict the focus of the US-AEP program to the industrial sector. The commitment to the biodiversity activity will be fully met in FY 1998.

D. Workforce and OE

Between FY 1995 and the end of FY1997, the Secretariat for the US-AEP will have incurred significant reductions in staff. Overall direct-hire staff will decline from a high of 11 (6 USDHs, two FSNs, one RSSA, and two program-funded direct-hires from EPA) to 5 (4 USDHs and one RSSA). This assumes that the U-AEP will be authorized to extend the incumbent RSSA. The Secretariat is also trying to obtain a part-time detailee on a non-reimbursable basis from the Department of Commerce.

By the end of FY 1997, the US-AEP Field Office will be closed. This important and effective operation was staffed by a single direct-hire SMG position and two FSNs. The closure will require substantial reengineering in the way the Secretariat conducts program oversight, maintains liaison with USAID missions, observes developments in the region, and carries out the representational functions required in relationships with country teams, Asian governments, and multilateral institutions. It should also be noted that field staff were previously responsible for management of the US-ASEAN Environmental Improvement Project (EIP) and maintenance of relations with the ASEAN Secretariat on environmental issues. The loss of field presence will require substantial additional travel by a greatly reduced Washington staff, with a concomitant increased reliance on other agencies with a continuing field presence, such as DOC, USDA, and State to support representational work, especially work with ASEAN, APEC, and host governments. Because of their own staff cuts, USAID missions will have very limited capacity to directly support US-AEP activities. Moreover, some missions believe staffing constraints will limit their engagement with US-AEP activities to "occasional ceremonial functions". In the absence of the previous substantial USG involvement, the US-AEP will need to press the limits of its various partnerships and contractors to assume more direct responsibility for promoting a US-Asia development dialog and linkages. The Secretariat will also be forced to rely on fuller use of US-AEP grantees and cooperative arrangements that, by definition, require less oversight.

Current US-AEP Washington staff levels (4 FTE) require a substantial redefinition of program management responsibilities within the Secretariat itself and among its partners. Increasingly, the "results process" is being utilized to more define program deliverables and to put into place a system for more "macro-management" of activities against approved objectives and sets of activities.

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This

Missing Links: Technology and Environmental
Improvement in the Industrializing World
World Resources Institute, Washington, D.C.
October, 1994

Appendix I

United States - Asia Environmental Partnership Press Articles

Appendix II

United States - Asia Environmental Partnership Performance Data Tables

UNITED STATES - ASIA ENVIRONMENTAL PARTNERSHIP				2/1997
STRATEGIC OBJECTIVE: Promote An Asian Clean Industrial Revolution				
SO Result 4: Increasing Evidence of Institutional, Professional and Information Linkages between Asia and the United States				Manager:
Unit of Measure: 1) An index (10 points) is proposed: i) free-standing environmental information centers established (1 point); ii) U.S. environmental policy newsletters, home pages, and commercial/technical/professional publications widely-circulating or widely-used (2 points); iii) federal or state-level long-term institutional linkages with Asian public environmental protection and/or industrial agencies (3 points); and iv) long-term institutional relationships engaging U.S. nongovernmental organizations, research organizations, or universities (4 points). 2) Partnership Contribution to US-AEP Activity Increasing.		Year	Planned	Actual
Sources: Survey by Technology Representatives. Comments: Process requires a mix of qualitative and quantitative judgement to be reviewed by an inter-project committee and approved by the Director. Definition: 1) Partnerships and information systems are intended to support (exclusively) SO and IO results and indicators. In other words, they are intended as license to open new areas of program activity. To qualify, the partnerships must be between important organizations, reflect substantive engagement in the target country, and have a long-term sustainability objective and plan. It is agreed that ii) above will require qualitative judgment (to be based on the advice, among others, of the tech reps). 2) The US-AEP will leverage core funds on the basis of more than a dollar of other investments for every dollar of USAID-furnished investment. Thus, over the life of the program, it is expected that significant amounts of cash and in-kind contributions will be made to the program by partner organizations and individuals from the U.S. and Asian public, private, and nongovernmental sectors. Frequency of Data Collection: Annually. Targets are cumulative. Assumptions: That international linkages are essential to a clean revolution.	Baseline	1995	N/A	\$110M
	Target	1996	\$140M	\$123M
	Target	1997	\$170M	
	Target	1998	\$200M	
	Target	1999	\$230M	
	Target	2000	\$260M	
Note: While the target was not reached, partnership contributions increased \$13 million. In review, it seems clear that there are methodological problems with this indicator. A revised indicator will be developed together with the preceeding partnership measure.				

INTERMEDIATE RESULT 1: Increasingly Efficient and Less Polluting Industrial Regimes Throughout Asia (CTEM)

Result 1.1: Increased Business Reporting, Disclosure and Accountability

Manager: Baldwin

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Unit of Measure: An index (1-6) is proposed: i) environmental reporting systems in place and working in the industrial sector (1 point); ii)

Year

Planned

Actual

<p>Sources: Environmental ministries in each country; published reports by host governments.</p> <p>Comments: The idea here is to build environmental accountability into industrial environmental management, using government policy and public pressure as a lever. Business reporting and disclosure are also key to building public awareness and promoting public participation (i.e., the building blocks of an enabling environment for a clean revolution). The first subindex reflects the most basic prerequisite for accountability - information. This index simply reflects whether environmental performance (e.g., compliance with environmental laws, quantitative measurements of effluent discharges, etc.) is being systematically measured and reported to environmental authorities. Typically, industries conduct such monitoring and reporting as part of their environmental permit requirements, although in some countries, it is done by environmental authorities. In either case, if systematic monitoring is being conducted, it would count as a positive indicator.</p> <p>The second subindex reflects the importance of information disclosure to the public as a significant incentive for industrial and government accountability and environmental compliance. Two aspects will be measured: legal requirements for information on industrial environmental performance to be available to the public, and the implementation of systems that in practice make this information readily accessible to the public.</p> <p>An industry is considered to be “complying” if it is meeting its environmental obligations. The specific obligations will vary widely from country to country (e.g., meeting environmental standards, following prescribed schedules to come into compliance, voluntary agreement with government agencies, etc.). Government agencies are the primary source of information on such compliance.</p> <p>Definition:</p> <p>i) Environmental reporting systems in place and working in the industrial sector:</p> <ul style="list-style-type: none"> - <i>Systematic</i> reporting of <i>environmental performance</i> to regulatory authorities. - <i>Systematic</i>: system in place for monitoring and reporting to environmental authorities on a routine basis -- ad hoc or investigative studies are not considered systematic. - <i>Environmental performance</i>: Whatever parameters are required by environmental authorities to measure environmental performance against standards - could be physical/chemical (e.g., pollutant discharges, ambient quality) or management related (e.g., waste management practices). <p>ii) Public disclosure laws for industrial practice in place and working:</p> <ul style="list-style-type: none"> - Requires both a <i>legal framework</i> in place establishing public's right to access to environmental performance information and <i>programs and procedures</i> in place to facilitate a flow of information to the public. <p>iii) Increasing percentage of industries complying with environmental requirements:</p> <ul style="list-style-type: none"> - Environmental authorities can document that compliance rates are increasing. <p>Frequency of Data Collection: Annually. Targets are cumulative.</p> <p>Assumptions: If conditions for subindex (i) and subindex (ii) are met, information to monitor subindex (iii) can be based on the host government's published reports.</p>	Baseline	1995	N/A	4 pts.
	Target	1996	5 pts.	5 pts.
	Target	1997	15 pts.	
	Target	1998	20 pts.	
	Target	1999	25 pts.	
	Target	2000	30 pts.	
<p>Note: The US-AEP Secretariat is committed</p>				
UNITED STATES - ASIA ENVIRONMENTAL PARTNERSHIP				2/1997
INTERMEDIATE RESULT 1: Increasingly Efficient and Less Polluting Industrial Regimes Throughout Asia (CTEM)				
Result 1.2: Voluntary Standards Covering an Increasing Percentage of Industry or GDP				Manager: Haines

Unit of Measure: The Percentage of Industry (as reflected by business or industrial associations) Subscribing to Environmental Guidelines or Principals.		Year	Planned	Actual
<p>Sources: United Nations and World Bank data, and a survey by the Technology Representatives.</p> <p>Comments: The idea here is the judgment that industrial associations can provide powerful support to public policy and private incentives through the promotion of voluntary standards, business charters for environmental quality, and environmental codes of conduct. The US-AEP goal is to promote voluntary environmental standards by bringing a large percentage of industry under the cover of environmental standards in each target country. The percentage of industry covered would be measured by the commitment of sector or subsector organizations to environmental standards and percentage any particular industrial sector represents of total industrial investment.</p> <p>Definition: A voluntary standard is a charter or other environmental guideline adopted by a national industry association.</p> <p>Frequency of Data Collection: Annually. Targets are cumulative.</p> <p>Assumptions: That most firms will adhere to define the industry standard.</p>	Baseline	1995	N/A	0%
	Target	1996	0%	0%
	Target	1997	2%	
	Target	1998	5%	
	Target	1999	15%	
	Target	2000	20%	
	<p>Note: US-AEP fully engaged in agro-industry, apparel, chemical, and pulp and paper sectors. Secretariat believes that, at least, two sectors will show success in five countries in FY 1997.</p>			

UNITED STATES - ASIA ENVIRONMENTAL PARTNERSHIP	2/1997
INTERMEDIATE RESULT 1: Increasingly Efficient and Less Polluting Industrial Regimes Throughout Asia (CTEM)	
Result 1.3: “Greening the Supplier Chain” Concepts Established	Manager: Haines

<p>Unit of Measure: A composite is proposed: i) presence of an organizational champion in each target country (e.g., industry association, other NGO, leading corporation, etc.) (1 point); and ii) 10 companies seeking to green their supply chain in each target country <u>and</u> the United States (1 point).</p> <p>Sources: Survey by the Technology Representatives and CTEM staff.</p> <p>Comments: There is general agreement that this is a trend which will begin to show-up in countries where there is evidence of a "clean revolution", and that it can be a powerful incentive for environmental quality. To qualify, the champion must be domestically financed (not donor financed), rooted in an important organization, be substantively engaged, and have a longer-term sustainability plan.</p> <p>Definition: First tier suppliers responding to environmental criteria imposed by leadership companies.</p> <p>Frequency of Data Collection: Annually. Targets are cumulative.</p> <p>Assumptions:</p>		Year	Planned	Actual
	Baseline	1995	N/A	0 pts.
	Target	1996	1 pt.	1 pt.
	Target	1997	6 pts.	
	Target	1998	12 pts.	
	Target	1999	18 pts.	
	Target	2000	22 pts.	
	<p>Note: The United Technologies Corporation (UTC) signed a Memorandum of Cooperation with the US-AEP in 1996, and BSR stepped into the role of US-AEP partner, aggressively pursuing opportunities in Indonesia.</p>			

UNITED STATES - ASIA ENVIRONMENTAL PARTNERSHIP	2/1997
INTERMEDIATE RESULT 1: Increasingly Efficient and Less Polluting Industrial Regimes Throughout Asia (CTEM)	
Result 1.4: Financial Institutions: Environmental Due Diligence Adopted	Manager: Zvinakis

<p>Unit of Measure: A composite is proposed: i) presence of an organizational champion in each target country (e.g., banking association, lead bank, etc.) (1 point); and ii) at least two major private sector banks (or other financial institutions) practicing "environmental due diligence" (1 point).</p> <p>Sources: Survey by the Technology Representatives.</p> <p>Comments: It is argued by some that this is the most important indicator, probably coming to maturity only when the compliance regime and environmental liability are active and in force (i.e., only when there is evidence of an Asian clean revolution). But it can also be a powerful incentive for environmental quality.</p> <p>Definition: Self-explanatory.</p> <p>Frequency of Data Collection: Annually. Targets are cumulative.</p> <p>Assumptions:</p>		Year	Planned	Actual
	Baseline	1995	N/A	0 pts.
	Target	1996	3 pts.	3 pts.
	Target	1997	6 pts.	
	Target	1998	12 pts.	
	Target	1999	18 pts.	
	Target	2000	20 pts.	
	<p>Note: Philippines was a major success story in 1996 as reported in the body of the FY 1999 R-4.</p>			

UNITED STATES - ASIA ENVIRONMENTAL PARTNERSHIP	2/1997
INTERMEDIATE RESULT 1: Increasingly Efficient and Less Polluting Industrial Regimes Throughout Asia (CTEM)	
Result 1.5: Strengthened Industrial/Environmental Extension Systems	Manager: Haines

<p>Unit of Measure: 1) A composite is proposed: presence of an organized industrial/environmental extension capability related to clean technologies and environmental management in each of the following institutional sectors in each target country and regionally (e.g., government/industrial sector agencies, business or industry associations, utility sector organizations, private sector consulting community, universities or other continuing education organizations, and other non governmental organizations - 1 point for each of the 4 categories).</p> <p>2) NGO/business collaboration models disseminated.</p>		Year	Planned	Actual
<p>Sources: Survey by the Technology Representatives and USAID Missions.</p>	Baseline	1995	N/A	0 pts.
<p>Comments: The idea here is to capture different ways of assessing the strength of institutional systems intended to promote and develop skills at the firm level related to clean design, technology and production, and environmental management. Capability is defined as "aggressive outreach" (e.g. information systems, training, etc.). To qualify, the capability must be domestically financed (not donor financed), rooted in an important organization, be substantively engaged, and have a longer-term sustainability plan. For each category, in each country, it may also be important to establish the reach of the extension outreach (e.g., firms touched, etc.).</p> <p>Definition: See above.</p> <p>Frequency of Data Collection: Annually. Targets are cumulative.</p>	Target	1996	0 pts.	0 pts
	Target	1997	10 pts.	
	Target	1998	10 pts.	
	Target	1999	10 pts.	
	Target	2000	10 pts.	
<p>Assumptions:</p>	<p>Note: Surveys have been initiated in India, and NPPR has been engaged as a US-AEP partner. Discussions continue with EPRI.</p>			

UNITED STATES - ASIA ENVIRONMENTAL PARTNERSHIP	2/1997
INTERMEDIATE RESULT 1: Increasingly Efficient and Less Polluting Industrial Regimes Throughout Asia (CTEM)	
Result 1.5: Strengthened Industrial/Environmental Extension Systems	Manager: Yamada

Unit of Measure: 1) A composite is proposed: presence of an organized industrial/environmental extension capability related to clean technologies and environmental management in each of the following institutional sectors in each target country and regionally (e.g., government/industrial sector agencies, business or industry associations, utility sector organizations, private sector consulting community, universities or other continuing education organizations, and other non governmental organizations - 1 point for each of the 4 categories). 2) NGO/business collaboration models disseminated. A target of three models for each of the ten target countries is proposed.		Year	Planned	Actual
Sources: Survey by the Technology Representatives and USAID Missions. Comments: The idea here is to capture different ways of assessing the strength of institutional systems intended to promote and develop skills at the firm level related to clean design, technology and production, and environmental management. Capability is defined as "aggressive outreach" (e.g. information systems, training, etc.). To qualify, the capability must be domestically financed (not donor financed), rooted in an important organization, be substantively engaged, and have a longer-term sustainability plan. For each category, in each country, it may also be important to establish the reach of the extension outreach (e.g., firms touched, etc.). Definition: See above. Frequency of Data Collection: Annually. Targets are cumulative. Assumptions:	Baseline	1995	N/A	0 pts.
	Target	1996	9 pts.	0 pts
	Target	1997	12 pts.	
	Target	1998	15 pts.	
	Target	1999	24 pts.	
	Target	2000	30 pts.	
	Note: US-AEP researching whether to continue with this activity based on relevance to overall goals. Evaluation underway.			
UNITED STATES - ASIA ENVIRONMENTAL PARTNERSHIP				
INTERMEDIATE RESULT 1: Increasingly Efficient and Less Polluting Industrial Regimes Throughout Asia (CTEM)				
Result 1.6: Increased Transfer of U.S. Environmental Experience, Practice and Technology		Manager: Unassigned		

Unit of Measure: Sales and investment data as currently collected.		Year	Planned	Actual
Sources: Comments: Based on value reported to, and confirmed by, US-AEP from U.S. companies or intermediaries (such as trade associations or state development agencies) of all sales of goods and services, and contracts for goods and services, systems, and projects, plus estimated value, to the U.S. partner, of all joint ventures and licensing agreements to U.S. firms. Definition: Frequency of Data Collection: Assumptions:	Baseline	1995	TBD	
	Target	1996	TBD	\$500M
	Target	1997	TBD	
	Target	1998	TBD	
	Target	1999	TBD	
	Target	2000	\$5Bn	
	Note: This area is subject to continuing discussion and analysis. The Secretariat hopes to have a proposal completed by June 1997.			

UNITED STATES - ASIA ENVIRONMENTAL PARTNERSHIP	2/1997
INTERMEDIATE RESULT 2: Increase in the Stock of Urban Environmental Infrastructure	
Result 2.1: "Privatization" Concepts Established	Manager: Gourlay

<p>Unit of Measure: A composite is proposed: i) presence of an organizational champion in each target country, e.g., industry association, other NGO, leading corporation, etc. (1 point); and ii) three privatization projects under contract (2 points).</p> <p>Sources: Data to be obtained through documents from local country agencies, multilateral development banks, and information gathered from US-AEP Tech Reps and Urban Reps in the following countries: Philippines, India, Thailand, Indonesia, Taiwan, and South Korea.</p> <p>Comments: There is general agreement that the only way to assure a dramatic increase in the stock of environmental infrastructure is through dramatic increases in private investment. To qualify, the champion must be domestically financed (not donor financed), rooted in an important organization, be substantively engaged, and have a longer-term sustainability plan. As with IPP, we believe that the successful launch of three privatization projects in each country will probably be sufficient to assure the idea is alive and well (i.e., is contributing to a clean revolution).</p> <p>Definition: Self-explanatory.</p> <p>Frequency of Data Collection: Annually. Targets are cumulative.</p> <p>Assumptions: a) That each country will move towards further private sector involvement to increase the overall amount of environmental infrastructure to be built; b) That there is a need for a “champion” or several “champions” to promote the privatization principals and push the development of viable private projects assuring the proper policies are in place.</p>		Year	Planned	Actual
	Baseline	1995	N/A	1 pts.
	Target	1996	5 pts.	5 pts.
	Target	1997	8 pts.	
	Target	1998	12 pts.	
	Target	1999	15 pts.	
	Target	2000	18 pts.	
	<p>Note: The modest first level indicator was met. Strategic plan under review. Secretariat believes there are important opportunities for collaboration with USAID field missions and Global Bureau.</p>			

UNITED STATES - ASIA ENVIRONMENTAL PARTNERSHIP	2/1997
INTERMEDIATE RESULT 2: Increase in the Stock of Urban Environmental Infrastructure	
Result 2.2: Increased Transfer of U.S. Environmental Experience, Practice and Technology	Manager: Gourlay

Unit of Measure: For technology transfer, sales and investment data as currently collected.		Year	Planned	Actual
<p>Sources: Based on transactions reported from Technology Representatives and Urban Representatives and confirmed by the participating US companies.</p> <p>Comments: Based on value reported to, and confirmed by, US-AEP from U.S. companies or intermediaries (such as trade associations or state development agencies) of all sales of goods and services, and contracts for goods and services, systems, and projects, plus estimated value, to the U.S. partner, of all joint ventures and licensing agreements to U.S. firms. Note: The results rationale contained herein, is based on a similar approach from environmental goods and services. The Secretariat is not yet comfortable with the formulation for infrastructure.</p> <p>Definition: Increase in the stock of environmental infrastructure is measured by the increase in US participation in i) environmental infrastructure projects/contracts and ii) the supply of US equipment into environmental infrastructure projects.</p> <p>Frequency of Data Collection: Annually.</p> <p>Assumptions: i) The amount of US dollar sales is indicative of an overall increase in the stock of urban environmental infrastructure. ii) Sales and transactions will not be counted unless confirmed by the US company.</p>	Baseline	1995	N/A	
	Target	1996	TBD	
	Target	1997	TBD	
	Target	1998	TBD	
	Target	1999	TBD	
	Target	2000	TBD	
	Note: This area is subject to continuing discussion and analysis. The Secretariat hopes to have a proposal completed by June 1997.			

UNITED STATES - ASIA ENVIRONMENTAL PARTNERSHIP	2/1997
INTERMEDIATE RESULT 3: A Regional Framework that Sustains a Clean Revolution in Asia	
Result 3.1: Important Regional Organizations Promoting Clean Production Concepts in the Region	Manager: Zvinakis

<p>Unit of Measure: A composite is proposed: i) evidence of environmental considerations in industrial strategy papers and loan documents at the Asian and World development banks(20 points); and ii) clean industrial production given prominence on the agenda at general assembly meetings of ASEAN and APEC (20 points).</p> <p>Sources: Survey by Technical Support Services contractor.</p> <p>Comments: While there is discussion of new industrial investment, the opportunity inherent to new industrial capacity, sustainable development and other Bruntland Commission concepts, there is little evidence of these ideas in the working documents of the Asian Development Bank, World Bank, ASEAN, and APEC. Yet, the positive leverage in the direction of a clean revolution inherent to these institutions is too important to leave aside (not to mention the difficulty if the organizations actually oppose any of the ideas).</p> <p>Definition: For the two banks, as reflected in indicators. For the two associations, as reflected in agendas.</p> <p>Frequency of Data Collection: Annually. Targets are cumulative.</p> <p>Assumptions:</p>		Year	Planned	Actual
	Baseline	1995	N/A	0 pts.
	Target	1996	10 pts.	10 pts.
	Target	1997	20 pts.	
	Target	1998	30 pts.	
	Target	1999	40 pts.	
	Target	2000	N/A	
	<p>Note: Target fully met at APEC. While the World Bank is working in all of these areas, work is confined to central divisions, not operations divisions.</p>			

UNITED STATES - ASIA ENVIRONMENTAL PARTNERSHIP	2/1997
INTERMEDIATE RESULT 3: A Regional Framework that Sustains a Clean Revolution in Asia	
Result 3.2: Asian National Institutions Promoting Clean Production Concepts to other Countries in the Region	Manager: Yamada

Unit of Measure: An important institution from a target country promoting clean production concepts to another country in the region (10 points).		Year	Planned	Actual
Sources: Survey by the Technology Representatives. Comments: There are clean revolution concepts and initiatives evident (to one extent or another) in each of the target countries (particularly so among the NICs). The dissemination and popularization of this experience could be an important driver in the region. To qualify, the institution must be important and substantively engaged in another country. The concepts must reflect the core ideas driving the clean revolution. Definition: Self-explanatory. Frequency of Data Collection: Annually. Targets are cumulative. Assumptions:	Baseline	1995	N/A	0 pts.
	Target	1996	2 pts.	2 pts.
	Target	1997	3 pts.	
	Target	1998	5 pts.	
	Target	1999	7 pts.	
	Target	2000	10 pts.	
	Note: Negotiations with South Korea and Taiwan to establish an animal waste initiative based on U.S. technology are in progress.			

Appendix III

United States - Asia Environmental Partnership Environmental Exchange Program

ENVIRONMENTAL EXCHANGE PROGRAM

The Environmental Exchange Program (EEP) is a unique initiative within US-AEP, yet it is also densely interwoven into the fabric of the other US-AEP components. EEP's multiple functions are managed by the Institute for International Education (IIE), the largest nonprofit educational and cultural exchange organization in the United States. EEP provides Asian professionals and relevant organizations and businesses with unique opportunities to address their most pressing environmental problems. Exchanges may flow from Asia to the United States, from the United States to Asia, or, occasionally, among various points within Asia. All environmental exchanges must respond to specific environmental demands in Asia and support US-AEP's Strategic Objectives through Intermediate Results. Wherever the location and whatever the program, participants can rely on IIE's professionalism to inform all three categories of exchange:

Environmental Fellowships provide senior Asian and US professionals with practical work, on-site opportunities for exchanging information and expanding their understanding of environmental issues and various approaches to solving problems. Typically lasting from one to three months, these non-academic fellowships help participants develop concrete solutions to specific environmental problems. Participants usually work side by side with overseas counterparts and may be placed in businesses, nongovernmental organizations (NGOs), or government agencies.

Environmental Business Exchanges provide Asian participants with opportunities to identify sources of US technology, observe key facilities and technologies first-hand and evaluate their suitability for Asian applications, meet face-to-face with potential partners, and confer with government officials and industry leaders. American participants may travel to Asia to evaluate the scope of environmental problems and suggest solutions that may draw upon US sources for appropriate technologies and practices. These exchanges are short and intense, usually lasting less than two weeks.

Environmental Technical Exchanges, normally a week long, offer short-term technical workshops. Technical Exchanges may be held in Asia or in the US, and generally involve participants from several different countries from varying sectors, (i.e. government, private sector, NGO). These exchanges offer participants an unique opportunity to delve into a specific industry-created environmental issue and address cross-sectoral concerns simultaneously.

The EEP Story

IIE began implementing the EEP 15 May 1995, and by 31 December 1996 had programmed 161 exchange activities for 1,313 individuals. This is 131% of EEP's original goal of 1,000 participants by 15 May 1998. During this time period, IIE received 319 applications for the

EEP from a variety of sources including: the ten US-AEP Technology Representatives and three US-AEP Urban Infrastructure Representatives overseas, the six USAID missions in Asia, miscellaneous companies, NGOs, and private individuals in Asia and the United States. (See Attachment I for a breakdown of the number of EEP participants by country and the percentage of EEP exchanges by type.).

Requests are screened by the program staff to determine if they are consistent with US-AEP's Strategic Objectives. At this time, EEP staff add value to proposed exchanges through refining activities, communicating with all relevant parties, contacting potential hosts, scheduling appointments, bargaining cost-share arrangements, and arranging appropriate travel logistics. Once all of the pieces are in place, promising exchanges are sent to the US-AEP Field Director in Manila for approval. Approval criteria includes the number of individuals that will be traveling, the type and amount of cost sharing that the home organization will contribute, whether the proposed exchange has the endorsement of the appropriate Technology Representative and/or USAID Mission, whether the participants have participated in a previous US-AEP activity, and the expected outcome in terms of potential sales and environmental impact.

One month after the event has been completed, EEP participants are obligated to produce follow-up reports. These reports are distributed to relevant US-AEP partners. In addition, six months after the EEP exchange's end date, IIE contacts participants to determine if any additional action occurred that further promotes US-AEP's strategic objectives. This contact is made through telephone and fax interviews or questionnaires.

Selection of Successful EEP Exchanges

The following exchange descriptions illustrate EEP's impact and contribution to the US-AEP. These are but 6 out of 161 exchanges programmed by IIE since May 1995.

Environmental Fellowships

1. ISO 14000/EMS Implementation Issues - Wong Fellowship Log # L

This EEP fellowship illustrates the potential impact one EEP exchange can have on future EEP exchanges. This fellowship positively affected the pilot ISO 14000 Seminar Series generating results for two US-AEP objectives: *Increasing Commitment to Corporate Environmental Management* (SO2) through *Voluntary Standards Covering and Increasing Percentage of Industry or GDP* (IR1.2) and *Increasing Investment in Environmental Technologies* (SO1) through *Increased Transfer of US Environmental Experience, Practice and Technology* (IR1.6). Mr. Ken Wong, a Senior Environmental Protection Department Officer with the Hong Kong Environmental

Protection Department (HKEPD), self-initiated his fellowship with assistance from the US-AEP Technology Representative in Hong Kong. The Fellowship took place in the US from March 9 - 30, 1996.

Mr. Wong requested practical exposure to ISO 14000 and EMS audits. Mr. Wong met with US professionals to discuss pre-audit planning, preparation of audit materials and the development of audit plans. Mr. Wong also met with numerous companies to share experiences in the implementation of the forthcoming ISO 14000 environmental management systems standards. His meetings included: Hach Company (Ames, Iowa), Maytag Company (Ames, Iowa), Milan Screw Products (Detroit, MI), Wastenaw County Government (Ann Arbor, MI), NSF International (Ann Arbor, MI), University of Michigan (Ann Arbor), US-AEP (Washington, DC), ICF Kaiser International (Fairfax, VA), and Foster Wheeler (Lyndhurst, NJ).

EEP discovered some unanticipated benefits during the six month follow-up review interview process. During his fellowship, Mr. Wong met with a senior member of an environmental engineering firm that had already won a bid to participate in the upcoming US-AEP ISO 14000 Seminar Series (April, 1996). At the time of their meeting, the company was reconsidering participation in the Seminar Series based on the assumption that the Asian market was not worth pursuing. Following the introduction to Mr. Wong, the company confirmed their participation. During the Hong Kong segment of the Seminar Series, the senior company official again met with Mr. Wong. The US company subsequently bid on and won a contract to assist HKEPD establish an ISO 14000/EMS training and information center for HKEPD employees and ordinary Hong Kong citizens. The HKEPD has clauses in the contract that will not permit the US company to disclose the exact value or nature of the project. However, the US official stated that the annual income from the project is “seven figures.”

Individually, EEP exchanges may seem like discrete activities. However, as this example clearly shows, many EEP exchanges overlap through subject matter and professional contacts and move US-AEP closer to achieving its strategic objectives.

2. Environmental Initiative for San Miguel Corporation - Aguado Fellowship Log # 146

Another excellent example of the programmatic synergy EEP exchanges bring to US-AEP's efforts in promoting a sustainable clean production revolution is Mrs. Marietta Aguado's Environmental Fellowship. Mrs. Aguado is the San Miguel Corporation's Senior Desk Officer for the Environment, where she is responsible for ensuring the smooth implementation and communication of San Miguel's recently adopted corporate environmental policy. This fellowship was initiated by Mrs. Aguado through IIE's office in Manila.

Mrs. Aguado visited the U.S. from September 14 to October 21, 1996 to learn about innovative environment management initiatives in the international, private, government, non-profit and press sectors. She met and worked with: Bristol-Meyer Squibb Company's VP

for Health, Safety and Environment; Jellineck, Schwartz and Connelly for three days; EPA's partnership programs; the UNDP's Environment Division; Coca-Cola's corporate environmental affairs office; CNN's "Earth Matters" production team; Washington State's Department of Ecology; and made numerous site visits in the Seattle area to the Red Hook Brewery, Weyerhaeuser Corporation, the King County Hazardous Waste Management Program, and the Pacific Northwest Pollution Prevention Research Center.

Due to this extensive exposure to US environmental management systems, Mrs. Aguado has been able to make San Miguel even more of a corporate environmental champion in the Philippines and the Asian region, clearly a development in US-AEP's strategic interests. For example, having met with Dr. Randy Yamada during her fellowship, Mrs. Aguado has taken a keen interest in US-AEP's agro-industry initiatives, particularly the planned Pan-Pacific Agro-Industry Council meeting scheduled for October 1997 at Epcot Center. Mrs. Aguado attended the International Environmental Journalist Conference in Cebu City in the fall of 1996, where according to US-AEP personnel she played a key role in promoting sustainable economic growth.

Mrs. Aguado's fellowship has spurred new interest in US-AEP's message on the part of San Miguel's various corporate groups. For example, EEP recently arranged for the a senior environmental engineer at San Miguel Brewing Group to attend an ISO 14031 conference in Keystone, Colorado, who had been invited to attend by CTEM/US-AEP. This is the first action taken by a corporation from the Philippines with regard to ISO 14000. Previous to Mrs. Aguado's fellowship, the Philippines had not entered the ISO 14000 voluntary standards arena on any level. Therefore, this fellowship led to *Increasing Commitment to Corporate Environmental Management* (SO2) through *Voluntary Standards Covering and Increasing Percentage of Industry or GDP* (IR1.2) by the number one company in the Philippines.

EEP recently provided Mrs. Aguado's name as well as those of other suitable Philippine environmental professionals to NPPR international coordinator Mr. Kevin McDonald in his efforts to establish a pollution prevention round table in the Philippines. Clearly Mrs. Aguado's fellowship has had a multiplier effect, allowing for the establishment of lasting professional relationships, champions for US-AEP's message of sustainable growth, and is now firmly established as an important part of a growing environmental network.

Environmental Business Exchanges

3. Legislative Framework and Environmental Technology Tour for Philippine House of Representatives' Committee on Ecology - Log #27

A six-person Congressional delegation from the Philippines' Committee on Ecology traveled to the United States to participate in an Environmental Business Exchange (EBE) in April 1996. The delegation examined US environmental legislation to expand their understanding of environmental problems and possible solutions.

While in the US, the delegation wanted to learn about technological advancements in air and water pollution control, incineration technologies, and solid waste management. In addition, they wanted insight on US environmental policies for managing environmental problems and to develop and foster enduring relationships with representatives from the US Congress and federal, state and local government entities responsible for environmental protection.

This EBE was designed to incorporate US-AEP Strategic Objective SO3 - *Increasing Public Policy Concern for Industrial Environmental Performance* (through Intermediate Result 1.1 - *Increasing Business Reporting, Disclosure and Accountability*). The initiator of this exchange was one of the participating Philippine members of Congress. At the time of the exchange, the Philippine House of Representatives was prioritizing the country's most pressing environmental concerns.

During this EBE, the delegation met with representatives from the Environmental Law Institute, Senator John H. Chafee - Chairman of the Senate Committee on Environmental Works, Representative Stephen Horn - member on the House Committees of Transportation and Infrastructure and Water Resources and Environment, Representative Robert Borski - member of the House Committees on Transportation and Infrastructure, and Water Resources and Environment, Representative J. Dennis Hastert - Vice-Chair of the Committee on Health and Environment, USEPA, Florida State Officials, Economic Development Council of Central Florida, Orlando Mayor, and Alenco International.

The Six-Month Follow-Up Questionnaire revealed that the delegation returned to the Philippines with implementable and practical information. For example, a member of the delegation filed a resolution investigating the lack of water treatment facilities in large-scale development projects (especially malls). This reflects an *Increasing Public Policy Concern with Industrial Environmental Performance* (SO3) through the *Promotion of Increased Business Reporting, Disclosure and Accountability* (IR1.1).

The delegation's Six-Month Follow-Up Questionnaire also revealed additional information about the status of clean technology and environmental management in the Philippines. The Department of Environment and Natural Resources (DENR) has two existing programs - the Industrial Environmental Management Program (IEMP) and Metropolitan Environmental Improvement Program (MEIP). Both IEMP and MEIP conduct studies, propose government regulations and promote environmentally friendly business practices. They pilot-test these regulations/practices in cooperation with participating private industrial firms. Knowing this, US-AEP can attempt to incorporate them

in the future to achieve *Increasing Evidence of Institutional, Professional and Information Linkages Between Asia and the United States* (SO4).

4. Taegu Dye and Bleaching Wastewater Seminar - Log #20

US-AEP's Technology Representative in Korea requested EEP assistance in locating an appropriate US expert to speak at the Taegu Dye Industry Association's Wastewater Conference through an Environmental Business Exchange. This conference was held in Taegu, Korea from January 30 - February 2, 1996. The seminar provided an opportunity for the EEP participant to introduce US dye-industry wastewater treatment technologies into the Korean market. Taegu is home to over 112 dye and bleaching companies seeking to comply with the Korean government's recently changed wastewater standards. This EBE was designed to achieve *Increasing Investment in Environmental Technologies* (SO1) through the *Increased transfer of US Environmental Experience, Practice and Technology* (IR 1.6).

Mr. Chris Aurich, Vice President of Gaston Country Dyeing Machine Company was a speaker at this program. Gaston Country Dyeing Machine Company informed EEP in the six-month interview that it sold a laboratory dyeing machine to Taegu Dyeing Research Institute. This direct sale was worth about USD \$100,000 and is a measurable increase in Korea's investment in environmental technologies (SO1). Mr. Aurich believes that this is the first of many sales to the Korean market.

As a result of Mr. Aurich's positive experience through EEP, he recently agreed to be a *pro bono* technical trainer at a technical exchange program in Indonesia. Overlapping synergies of this nature allow EEP programming to be more efficient and effective. Mr. Aurich's participation in an EEP Technical Exchange is discussed below.

Technical Exchanges

The Technical Exchanges developed by the EEP provide an opportunity to work with US-AEP partners to create tailored short term training session which address multiple objectives simultaneously. Technical Exchanges are initiated and developed by the EEP in response to common field and program interest determined through an annual EEP survey.

5. Municipal Wastewater Treatment Technologies

EEP worked with US-AEP's Infrastructure component to design a November, 1996 wastewater treatment program which analyzed the strategic planning framework necessary to develop a cost-effective wastewater treatment project. The program used a case-study to illustrate key concepts and to showcase US expertise and technology. Key concepts included coordination of interested parties, consideration of relevant regulatory requirements, appropriate water pricing strategies and the need to plan at the outset for anticipated operation and maintenance. Thirty high-level municipal officials from the following countries: India, Nepal, Bangladesh, Sri Lanka, Philippines, Hong Kong, Korea, Thailand, Malaysia and Indonesia attended this program. Training was provided by MetCalf and Eddy, Stone Environmental, and WMX Technologies.

Working with the EEP, the US-AEP Infrastructure component not only offered input on the agenda but also assisted in targeting the appropriate audience given US-AEP Infrastructure program objectives. An Infrastructure representative attended the entire program to establish relationships for US-AEP with the attendees for future Infrastructure activities. Anticipated outcomes from this program include the possibility of sales of US goods and services *Increasing the Transfer of US Environmental Expertise, Practice and Technology* (IR 3.2) which contributes to *Increasing Investment in Environmental Technologies* (SO1).

6. *Environmental Management Systems for the Textile Industry*

EEP recently worked with US-AEP's CTEM component to design a second textile-industry technical exchange. The textile industry is one of four CTEM focus industries for 1997. The program, Environmental Management Systems for the Textile Industry, was held in Bandung, Indonesia in February, 1997 and involved representation from five countries (Hong Kong, India Indonesia, Taiwan and Thailand) which included senior level managers and officials from the public and private sector as well as the NGO and academic community.

The textile technical exchange program focussed on the many concepts in environmental management systems and the use of clean process technologies as a logical way of doing business. Mr. Chris Aurich, President of Gaston Country Dyeing Machinery Company discussed clean technologies available for the dyeing and bleaching processes. His talk provided him with an opportunity to showcase US equipment and expertise. Other company representatives included EnviroNet International Management Systems, Swift Far East Ltd., and Earth Technologies. Also included in the program was discussion of the role of government policies and regulations in promoting the consideration and use of clean technologies by the private sector. Given that this program has cross-sectoral representation, practical discussions on how various interests can cooperate to develop realistic environmental protection programs are anticipated.

Participation of CTEM's textile expert representative in this technical exchange provides a targeted opportunity to establish textile industry networks for future CTEM activities. Through the materials presented in the program and the relationships built with textile industry

representative from the region, progress across all four of US-AEP's strategic objectives through intermediate results 1.2, 1.3, 1.5, and 1.6 is anticipated.

The Institute of International Education

The Institute of International Education (IIE) offers its clients more than 75 years of experience in providing and managing training to help countries strengthen national institutions, build and maintain economic competitiveness, and tackle global problems in fields such as the environment and health. IIE administers some 250 international education programs annually for more than 200 sponsors. These sponsors include: US and foreign government agencies, corporations, foundations, nongovernmental organizations and individuals. By developing and administering exchange and training programs - both for Americans and individuals from abroad - and providing technical assistance overseas, IIE helps create the human resources needed to address the challenges facing the global community.

ATTACHMENT I

The following table presents a breakdown of the number of EEP participants by country and EEP exchange type.

# OF EEP PARTICIPANTS by HOME/HOST COUNTRY & TYPE OF EXCHANGE				
<i>Home/Host Country</i>	<i>Fellowships</i>	<i>Environmental Business Exchanges</i>	<i>Technical Exchanges & Workshops</i>	<i>Total</i>
Bangladesh	0	7	7	14
Hong Kong	8	10	69	87
India	1	31	144	176
Indonesia	3	39	113	155
Korea	3	41	88	132
Malaysia	0	23	78	101
Mongolia	0	1	0	1
Nepal	0	2	4	6
Philippines	2	50	53	105
Singapore	0	7	8	15
Sri Lanka	0	12	6	18
Taiwan	1	31	78	110
Thailand	4	84	227	315
United States	2	51	25	78
Total	24	389	900	1,313

The following table shows the percentage of EEP exchanges by type.

Type of EEP Exchange	Number of Completed Exchanges by 31 December 1996	% of Exchanges by type
Environmental Fellowships	17	11%
Environmental Business Exchanges	129	80%
Environmental Technical Exchanges and Workshops	15	9%
Total	161	100

Appendix IV

United States - Asia Environmental Partnership Activity Summary

ACTIVITY SUMMARY

A. STRATEGIC OBJECTIVE - an ASIAN CLEAN INDUSTRIAL REVOLUTION

1. Industrial Environmental Performance: Measuring Performance
2. Industrial Environmental Performance: Policy Approaches
3. Industrial Environmental Performance: a Presentational Model
4. Environmental Performance & Management: International Partnership
5. Industrial Environmental Management: International Standards

B. INTERMEDIATE OBJECTIVE - INDUSTRY

6. Industrial Environmental Performance: Disclosure & Accountability
7. Industrial Environmental Performance: Financial Due Diligence
8. Industrial Environmental Management: Greening the Supply Chain
9. Industrial Environmental Management: Voluntary Business Standards
10. Industrial Environmental Management: Industrial Extension
11. Industrial Environmental Management: Technology Transfer

C. INTERMEDIATE OBJECTIVE - INFRASTRUCTURE

12. Infrastructure Development and Investment: Privatization
Technology Transfer

D. INTERMEDIATE OBJECTIVE - FRAMEWORK

No Defined Activities: cross-cutting themes

1. Regional Organizations

- a. APEC
- b. ASEAN
- c. Asian Development Bank
- d. World Bank

2. Regional Initiatives

- i. Hong Kong
- ii. India
- iii. Indonesia
- iv. Malaysia
- v. Philippines

- vi. Singapore
- vii. South Korea
- viii. Sri Lanka
- ix. Taiwan
- x. Thailand

1. Industrial Environmental Performance: Measuring Performance

Objective: to introduce industrial environmental performance as a national industrial policy goal and/or as an environmental indicator in ten target countries.

Outputs: initially, a major conceptual effort through the National Academy of Engineering, and a major promotional effort through the APEC Ministerial for Sustainable Development.

Status: launched in November, 1996. Operating on an 18 month timeline.

2. Industrial Environmental Performance: Policy Approaches

Objective: to introduce a range of policy options to promote cleaner industrial environmental performance, principally to economic and industrial agencies in ten target countries.

Outputs: initially, a major paper through Winrock International, followed by organization of a policy network between appropriate policy analysts and policy makers from Asia and the U.S.

Status: launched in January, 1997. Operating on a twelve month timeline.

3. Industrial Environmental Performance: a Presentational Model

Objective: to develop a communications tool to underscore the 5 - 10 principal policy themes championed by the US-AEP

Outputs: initially, and in cooperation with an advisory panel, development of a conceptual model, followed by more complete country-based models in seven of ten target countries.

Status: to be launched in February, 1997. Phase One on a nine month timeline. Phase Two on an 18 month timeline from January, 1998.

4. Environmental Performance & Management: International Partnership

Objective: to forge important institutional partnerships in support of US-AEP strategic and intermediate objectives, and specifically in the areas of information, professional association, and finance.

Outputs: partnerships between important Asian and U.S. organizations, reflecting substantive engagement in a target country, and with long-term sustainability objective, and plans.

Status: long-time objective of the US-AEP, to be reorganized under new strategic premises and management structure in February, 1997.

5. Industrial Environmental Management: International Standards

Objective: to make ISO 14000 the national standard for industrial environmental performance in ten target countries.

Outputs: initially national accreditation bodies in ten target countries, followed by the certification of at least ten firms in each country.

Status: early objective of the US-AEP, to be completed over a twenty-four month period from January, 1997.

6. Industrial Environmental Performance: Disclosure & Accountability

Objective: to promote information-based environmental policy approaches throughout the region.

Outputs: initially, to extend the reach of the PROPER and ECO WATCH tools in Indonesia and Philippines, and over the longer term to introduce and extend other prototype information-based policy approaches and tools in ten target countries.

Status: introduction of the initial two-country prototype, to be completed over a twenty-four month period from June, 1997.

7. Industrial Environmental Performance: Financial Due Diligence

Objective: to introduce new environmental criteria to the already established financial criteria used by banks, investment companies, insurance organizations, etc.

Outputs: initially, to engage lead institutions as champions in each of ten target countries.

Status: several events already completed, but a more comprehensive activity to be approved by March, 1997, with an eighteen month timeline.

8. Industrial Environmental Management: Greening the Supply Chain

Objective: to introduce the idea of “greening the supply chain” to U.S. multinationals operating in the Asia region and to larger Asian national industrial organizations.

Outputs: initially, to engage lead institutions (both associations and separate multinationals) as champions in five priority sectors.

Status: activity underway since January, 1996, operating on a twenty four month timeline.

9. Industrial Environmental Management: Voluntary Business Standards

Objective: to cover each of the important industrial sectors in Asia with an environmental charter, as a voluntary business standard.

Outputs: initially, voluntary standards in the agro-industrial, chemical, and pulp and paper sectors.

Status: activity underway since January, 1996, operating on a twenty-four month timeline.

10. Industrial Environmental Management: Industrial Extension

Objective: to build a an industrial/environmental extension system, linked to a U.S. information resource, in each of ten target countries.

Outputs: initially, the engagement of five lead industrial extension/outreach organizations in each of five target countries, linked to a U.S. information resource.

Status: to be organized as an activity by March, 1997, with a twenty-four month timeline.

11. Industrial Environmental Management: Technology Transfer

Objective: to promote the export of U.S. environmental and clean production technologies.

Outputs: the successful ongoing management of a multi-institutional promotion/ information/demonstration activity .

Status: operating from the inception of the program. Evaluation scheduled later in 1997.

12. Infrastructure Development and Investment: Privatization & Technology Transfer

Objective: to promote the privatization of environmental infrastructure in Asia, and the export of U.S. capital and technology.

Outputs: the successful ongoing management of a multi-institutional promotion/ policy activity.

Status: operating from the inception of the program, reorganized for technology transfer in November, 1996, to be reorganized for privatization in March, 1997.

Appendix V

United States - Asia Environmental Partnership Financial and Budget Tables

Table 1			
All Resources Table			
USAEP			
(\$000)			
		FY 1998	FY 1999
Funding Category	FY 1997	Base	Base - 5%
Sustainable Development			
Economic Growth			
Child Survival/Disease			
Basic Education			
Population			
Environment	14,525	20,000	19,000
Democracy			
Total:			
Economic Support Funds			
PL480			

Other			
GRAND TOTAL	14,525	20,000	19,000

Table 2			
Funding Scenarios by Intermediate Results			
USAEP			
FY 98 - 99			
(\$000)			
		FY 1998	FY 1999
Result	FY 1997	Base	Base - 5%
Intermediate Result 1:			
Increasingly Efficient and Less Polluting			
Industrial Regimes			
Total IR 1:	10,349,000	16,458,000	17,175,000
Intermediate Result 2:			

Increase in the Stock of			
Environmental Infrastructure			
Total IR 2:	1,576,000	1,642,000	1,825,000
Intermediate Result 3:			
Sustainable Development as a			
National Goal			
Total IR 3:	0	0	0
Biodiversity Commitment/Global Bur	2,600,000	1,900,000	0
GRAND TOTAL	14,525,000	20,000,000	19,000,000

Table 3



Staff Requirements By Intermediate Result (FY 1997)



USAEP

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Strategic

Staff	Objective	Total Staff by

	Clean Revolution	Class

USDH	5	5

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FSN* (OE)	2	2

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FSN* (TF)	0	0

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FSN* (Prog.)	0	0

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US/TCN PSC (OE)	0	0

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US/TCN PSC (TF)	0	0

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US/TCN PSC (Prog.)	0	0

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Total Staff by	7	7

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Objective

Table 4	
USAEP	
Operating Expense Requirements	
(\$000)	
OE/Trust Funded Levels	FY 1997
Major Function Code	
U100 USDH	
U200 FN Direct Hire	
U300 Contract	
U400 Housing	
U500 Office Operations	
U600 NXP	
Total Mission-Funded	
...Of which Trust Funded	

Table 5

GLOBAL BUREAU SUPPORT				
				Estimated Funding (\$000)

USAEP	Global Bureau Support:			Base	Base	Base - 5%

Intermediate	Activity			Obligated by:

Result	Title & Number	Priority *	Duration	Global Bureau

IR 1: Increasingly Efficient and Less	499-0102 CTIS (ETNA Database & CTEM Center U.S.)	High	3 Years (97-00)	0	200	300
None	Biodiversity Conservation Network	High	2 Years (97-99)	2,600	1,975	0
Framework	PCE-I-00-96-00002-00 EPIQ (IRG)	High	2 Years (97-99)	705	750	0
GRAND				3,305	2,925	300

Appendix VI

**United States - Asia Environmental Partnership
Environment MIT**